FINAL REPORT

Task #8-87-3

SIMULATION MODELS FOR DEVELOPMENT OF OPTIMAL MATERIAL HANDLING, STORAGE AND DISTRIBUTION, PHASE I

Prepared by

Prof. Richard Lee Storch
Industrial Engineering, FU-20
University of Washington
Seattle, Washington 98195

For
SNAME Ship Production Committee
Industrial Engineering Panel SP-8

Under The
National Shipbuilding Research Program

In Cooperation With
National Steel and Shipbuilding Company
San Diego, California

September, 1989

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
SEP 1989	**N/A**	**-**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Simulation Models for Development of Optimal Material Handling, Storage and Distribution, Phase I	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Naval Surface Warfare Center CD Code 2230 - Design Integration Tools Bldg 192 Room 128 9500 MacArthur Blvd Bethesda, MD 20817-5700**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**SAR**	**123**	

DISCLAIMER

These reports were prepared as an account of government-sponsored work. Neither the United States, nor the Maritime Administration, nor any person acting on behalf of the Maritime Administration, (A) makes any warranty or representation, expressed or implied, with respect to the accuracy, completeness or usefulness of the information contained in this report/ manual, or that the use of any information, apparatus, method, or process disclosed in this report may not infringe privately owned rights; or (B) assumes any liabilities with respect to the use of or for damages resulting from the use of any information, apparatus, method, or process disclosed in the report. As used in the above, "Persons acting on behalf of the Maritime Administration" includes any employee, contractor, or subcontractor to the contractor of the Maritime Administration to the extent that such employee, contractor, or subcontractor to the contractor prepares, handles, or distributes, or provides access to any information pursuant to his employment or contract or subcontract to the contractor with the Maritime Administration. ANY POSSIBLE IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR PURPOSE ARE SPECIFICALLY DISCLAIMED.

EXECUTIVE SUMMARY

The initial phase of a two part study to develop a simulation procedure for shipyard material handling operations is described. This phase involved investigation of software alternatives available for simulation, optimization, material handling and data base management. Additionally, material classifications, equipment choice figures of merit and a material handling equipment data base have been developed. The report presents a discussion of the software investigation and presents choices and rationales to be used in the second phase. Additionally, the format and typical entries in the material handling data base are presented. A detailed discussion of the final figure of merit equation developed and to be used is also included. A detailed description of the simulation and optimization model is also presented. Finally, the results of a feasibility study concerning the potential for successful simulation of the problem is presented.

Three data bases are required in order to analyze the material handling choices. These describe (1) the material handling equipment available, (2) the material to be moved, including time and location it IS needed for the succeeding work operation, and (3) the facility layout, indicating the work stations to and from which material must be moved. The data bases will provide input data to the simulation model. Therefore, they must contain information in sufficient detail to permit valid analyses to be conducted. They should not, however, contain more detail than can be effectively used in the simulation.

The material handling equipment data base must contain information that will enable two major functions to be accomplished. First, the feasibility of using a particular piece of material handling equipment for a given move must be verified. This is a necessary condition for further consideration of the piece of equipment. The feasibility verification requires a determination that the equipment is capable of handling the weight, size and route required for the move. It also implies that the equipment is not currently being used for another move. The second function invovles making an optimum choice of available equipment based on a computation of the cost of using a particular piece of equipment. Since there are likely to be many possible choices, the simulation model should be run making different choices, so that these options can be compared after evaluating total project costs. The data categories for equipment must enable the model to determine these characteristics.

These files are used to develop a new file, called the potential equipment list. This file is continually updated for each move and over time during the simulation. This

file also identifies the piece of equipment by name. It then has a capacity code to indicate the number of items within a material classification that can be handled by this piece of equipment. A columnn, updated throughout the execution of the simulation indicates the status of the equipment, including available, in use, or down. Another column indicates the location status, i.e. where a piece of equipment is located in the facility at a given time. This information is also updated during the simulation. Finally, a series of columns indicate the cost categories including labor, energy, maintenance, down time, purchase, installation and debt service costs. The last column is the total cost associated with the use of a given piece of equipment up to the current time in the project (for a given simulation run). Note that while most of the data categories are constants, some are variables that are updated during the simulation and some may be stochastic, i.e. represented by a distribution. These variables are evaluated using typical random number generators during the running of the simulation.

Since the number and variation of individual items to be moved during a shipbuilding or major ship repair/overhaul project is extensive, a means of limiting the size of this data base to manageable proportions is required. In order to accomplish this, a material classification scheme is used. This scheme employs fifteen major classes, with the ability to subdivide the classes into sub-categories based on the specifics of the material handling problem. The classes include:

1. Structural raw materials
2. Outfitting raw materials
3. Pipe and tubing fittings and valves
4. Electrical system components
5. Hull and superstructure components
6. Fastening materials
7. Motors and pumps
8. Major equipment
9. Sheet metal components
10. Miscellaneous materials
11. Sub-assembilies (structural)
12. Outfit units
13. sub-blocks
14. Blocks
15. Grand blocks

The facility layout data base is a direct function of the simulation software to be used. Most manufacturing simulation software packages include a simple structure for input of the facility layout. Consequently, no specific recommendations on the format of the layout input is made in this phase of the research. Following development of a case

study of the material handling simulation (phase II of the research), the specifics of inputting the layout will be explained.

The choice of software to be used in developing the data bases was made based on two primary factors. These are the ability of the data base software to perform the necessary functions, and the transferability of the software between shipyards. Consequently, a relatively powerful data base handling software package is required. Additionally, it must be a system that is readily available or already in common use. One such software system that satisfies these requirements is LOTUS 1-2-3.

LOTUS 1-2-3 offers a typical spreadsheet approach to data base management. The software is readily available for PC operation on most commonly used machines. It provides ample space for the major data bases required, offering 256 columns and 8192 rows for data entry. The information required per piece of material handling equipment is considerably less than the 256 column capacity. Similarly, shipyards are not likely to have in excess of 8192 individual pieces of material handling equipment to be managed and scheduled. The spreadsheet format is one with which most computer users are familiar. It is also quite powerful, providing considerable computational and sorting capability.

There are many manufacturing simulation software packages available for consideration for use in optimizing material handling. More than 50 such software packages are currently on the market. Consequently, choices cannot be made based on trials of these various packages. Again, simple criteria must be applied and choices made. The major criteria are flexibility, capability, availability and relative cost. Use of packages that are commonly used and readily available is prudent. Given this need to make a choice without the benefit of comparative testing, this recommendation is based on availability and common use. Most simulation packages that have been developed for manufacturing application using PCs are capable of dealing with the problem to be addressed in this research. Of the packages available, SLAM II, perhaps with the graphical add on package TESS is recommended. This software is commonly available, has been used in numerous applications and is backed by an on-going support service. It is relatively easy to use and has both the power and flexibility needed to develop a material handling optimization simulation program for a shipyard. Should an individual shipyard have another standard simulation package available, switching from SLAM II should be relatively easy using the model developed in this and the second phase of the research.

The actual material handling simulation and optimization model will include a number of parts. These can be subdivided into optimization and simulation. The optimization is based on the development of a "figure of merit" or total cost formulation. Using this formula, applied to each move and the associated piece of material handling equipment used, a total cost of material handling equipment choices can be determined for a given plan. The total cost of various plans can then be compared. The cost formula computes cost in four basic categories. These include the labor cost associated with the use of a given piece of material handling equipment, the energy cost, the cost associated with "emergency" or unanticipated breakdowns of the equipment, and the cost of having the equipment available, including purchase, depreciation, scheduled maintenance, etc. These costs are combined on either an hourly use rate or over a total projected project duration and then summed for the project.

The simulation is run to provide a means of evaluating alternative choices of material handling equipment usage and scheduling. Note that in the total cost equation, labor and energy costs for a particular piece of equipment and a specific move must include unloaded moves (if required) to position the equipment where it is needed. The simulation model will account for this requirement. Additionally, capital costs (purchase and installation), must be based on present value computations.

The simulation is used to provide and compare material handling equipment choices and schedules. Initially, the overall project schedule must be defined by work and material category. In effect, a combined graph of work control parameter versus time is required for each work station pair, i.e. source and destination, involved in material movement. This will be nearly every work station. The major exceptions will be work stations that are directly linked to succeeding or preceding work stations, such as a panel line. Here there is no material handling choice since there is a direct connection and most likely dedicated equipment for material handling. The predominant parameter, as in product oriented scheduling, is weight. However, where other parameters are used? such as number of pipe piece connections, a parameter to relate the work schedule to the material handling schedule is required. The material classification categories previously defined will be used here.

Given this material handling schedule to support the master production schedule, the simulation may begin. The inputs to the simulation from the material handling schedule are the feasible material handling equipment for each move, the distance of each move, and the handling weights per material category for each move. Any piece of material

handling equipment that is in the feasible data file may be ready to be used at the beginning of a working period, or only for some portion of that period. The equipment may need to be moved empty to the required work station, and it may be used for a single move, or for a series of moves in sequence. Similarly, materials to be moved may be ready and prepared to be moved at a given point in time, or a distribution of probability of it being ready can be used.

The simulation will produce outputs which define the piece of material handling equipment utilized for each move, the utilization time for each piece of equipment, and any delays associated with either lack of availability of material handling equipment or materials to be moved. Based on these outputs, the total cost for the project of that option can be computed. A series of simulation runs can be compared to choose a least total cost material handling equipment utilization schedule.

A significant consideration in this proposed simulation is the method of choosing a piece of equipment for a specific move. Two suggestions are presented and will be incorporated in the final model; First, manual (possibly interactive) selection is recommended. In effect, this is the way moves are currently scheduled in most shipyards. The manager of the department responsible for providing material handling equipment commonly uses some combination of a schedule and immediate requests to make short term decisions and assignments. The model should therefore permit this expertise to be applied to provide a starting point. The simulation can then be run to evaluate this proposal and to generate similar but alternative approaches. The second approach is to automate these decisions based on a set of heuristics. The model will employ such a set of heuristics, but in actual use, each manager should have the opportunity to adjust the heuristics to suit an individual shipyard's needs and capabilities. These two approaches can be combined, either by providing interactive override of heuristic choices by the manager, or by using the heuristics to develop alternate schedules based on the initially input material handling equipment utilization schedule.

There are two primary issues of feasibility. The first involves the size and therefore running time of the model. The use of material categories and the scheduling parameters is a means of limiting the size of the simulation model. There are fifteen material categories, including the ten for specific individual material items, plus the five assemblY categories. There are likely to be between 15 and 30 work station locations required to model the production process. This size model should be well within the capabilities of the PC based version of SLAM II recommended for use. Additionally, the material handling equipment data base should not be difficult to develop or handle. Similarly,

the project schedule, if appropriately developed using the schedule parameter approach should also not be too large or cumbersome to handle. Clearly, the movement of every single item is not intended to be incorporated in the model. Rather, preplanned moves of equipment, manufactured parts and assemblies between work stations only are evaluated by this model. Thus the large frame material handling issues are involved. Subject to project specific needs, however, the model can be used to evaluate "critical" moves no matter what category (including size, weight, etc.) material is involved. Therefore, preplanning of moves is a prerequisite to the use of the model. The simulation model should be an effective tool to evaluate changes from the plan and to alter the material handling schedule to deal with such changes.

The second feasibility issue is more difficult to analyze prior to actually attempting to develop the model. This involves the heuristics development for making individual equipment choices. Heuristics-can be extremely difficult to develop. This seems to become a more significant problem as they more closely model the actual decision process employed by an experienced decision-maker. In developing the simulation model, less meaningful but simple heuristics can be a useful starting point. The accuracy (utility) of the heuristics can then be increased incrementally until they are either satisfactory or the efficiency of the model begins to deteriorate significantly. While there is no assurance that such a set of heuristics can be obtained, the increasing success of such simulation modeling in other manufacturing environments provides some optimism.

This report describes the results of the first phase of a two phase research project concerning the use of simulation to aid in the choice of material handling equipment for use in a shipbuilding or ship repair/overhaul project. Detailed is the outcome of attempts to carefully formulate the problem, both to indicate the data required and to evaluate the feasibility of producing software that would be useful to shipyard material handling department managers. Although only completion of phase II of the project can definitely establish the viability of simulation to solve this problem, the author is encouraged by these results. Additionally, while the size and scope of shipyard projects represents a significant problem in utilizing simulation, it appears possible to handle a problem of this size, if it is formulated in the manner recommended. A key factor, as in any simulation, is the accuracy of input data. In particular, schedule and work progress parameter data must be valid in order to produce valid simulation results. Despite this potential difficulty, the use of simulation shows considerable promise as a tool to help reduce costs and improve planning of material handling operations in a shipyard.

The simulation model that has been formulated, and the data base structures are a significant initial step. This effort is the part of the process that requires innovation and abstraction. Since this phase of the research has been successfully completed, the remaining steps, while difficult, are less innovative. Therefore, there is a high likelihood that phase II would produce a workable product. Additionally, as described previously, a working simulation model of a shipbuilding or repair/overhaul project could be a powerful tool in process improvement.

There are some outputs of this phase of the work that can be useful immediately. The material classification system can help planners reduce the scope of other common shipyard tasks. It can provide a framework for material handling planners to address schedules without employing simulation. Secondly, the equipment manufacturers data base can be useful to maintenance and procurement people. Finally, the cost formulation can also be a helpful tool to material handling planners, aiding their thought process in making manual assignments, as is current practice. Naturally, the most significant potential benefits of this work require completion of phase II of the research.

TABLE OF CONTENTS

I. INTRODUCTION

Effective management and control of modern product-oriented shipbuilding systems is based on control and monitoring of material. Work packages are organized around pallets, which are conceptual and physical groupings used for production scheduling and control. The principles of material management in shipbuilding have been described in a series of NSRP publications. Numerous choices of material ordering, fabrication, storage, marshaling and handling systems are possible. To date, however, the details of how to choose and apply these principles based on the specifics of a given shipyard's operations, building strategy, layout and work organization have not been thoroughly explored. Optimal selection from among the choices available can significantly impact overall productivity of the shipbuilding process.

Simulation modeling is a tool that can be effectively employed to optimize choices in a complex decision making environment. Specifically, for a given objective funtion, such as total cost, a minimum can be obtained by simulating the results of a series of possible solutions. In this case, the desired solution is a choice of material handling equipment to be used to move particular items from one work station to another. By coupling a simulation of the entire series of moves associated with a shipbuilding or ship repair project, with the computation of the total cost associated with the moves, a least cost assignment of material handling equipment to specific moves can be accomplished. The research reported on here involved the formulation of the procedures and necessary data bases with which to generate a minimum total cost for planned material movement.

This research is to be performed in two phases. This report is for phase I. Phase I was primarily concerned with developing the conceptual framework for employing simulation as the tool for improving material handling operations. This framework includes description and formulation of the data bases necessary for solving the problem, choosing software to be recommended for use, developing material classes to reduce the problem to a manageable size, developing an optimization formula, developing a process flow chart for the total simulation and optimization procedure, and evaluating the feasibility of success should phase II be performed.

II. SIMULATION

Introduction

computer simulation methods have been available since the early 1960's and are now commonly used in management science [1]. These methods are being used to study such broad topics as economic systems, business systems, communication systems, biological systems, transportation systems, and many others. The wide range uses of computer simulation methods result from their many advantages. Simulation methods can be adopted when a complete mathematics formulation of the problem does not exist, or when analytical methods of solving a mathematical model have not been developed. Simulation may be the only possible method to test systems upon which experimentation in real situations can not be performed. After a simulation program has been developed, it can be used as an experimental laboratory. This is extremely useful when tests are expensive or destructive in the real world.

Because of the wide applicability of simulation and its potential uses, it may be helpful to present a brief introduction to simulation in general. First, the knowledge of systems, their classifications, and the system models are discussed. To illustrate the basic concepts of simulation, a bank teller example is presented. Then, some simulation modeling methods are discussed. Finally the general procedure of simulation is presented.

Systems

The term system is used in a wide variety of ways. It's definition must be both broad and concise enough to cover the many uses in the world. According to Gordon [2], a system is defined as an aggregation or assemblage of objects combined in some regular interaction or interdependence.

As an example of a conceptually simple system, consider the discharge of a river after a rain. After rain in the area of the river, the discharge of the river will increase. sometime later, the discharge will decrease. The discharge is a function of the rainfall and time.

As a second example, consider a factory that produces and assembles parts into a product. The system is composed of a purchasing department, a fabrication department, an assembly department, and a shipping department. The purchasing department provides a supply of raw materials and the shipping department sends off the finished products.

In both of the systems, there are certain distinct objects, each of which possesses properties of interest. There are also certain interactions in the system that cause

changes. The term entity will be used to denote an object of interest in a system. The properties of an entity are called attributes. For a given entity, there might be many attributes to describe it's properties. An activity is a process which causes changes in the system. The term state of the system describes all the entities, attributes, and activities as they exist at one point in time.

In the description of the river system, the entities of the system are the water in the river and in the precipitation. Their attributes are such factors as the speed of the river and the amount of rainfall. The activities are the flow of the river and the descending of the rain. In the factory system, the entities are the materials, the parts, the products, and the departments. The activities are the manufacturing processes of the departments. The attributes are such factors as the quality and quantity of the products, types of parts, or the machines in a department.

Table 1 presents examples of what might be considered to be entities, attributes, and activities for a number of other systems. If the bus transportation in Seattle is considered as a transportation system, the individual bus is regarded as an entity having as attributes speed and distance traveled. Among the activities is the driving of a bus. In the case of a barber shop, the customers of the shop are entities with the styles of their hair cuts as attributes. The activity is the hair cut process. In the case of a bank system, the customers of the bank are entities. Their attributes are the account balance and the credit status. The service process is a typical activity. Other examples are listed in Table 1.

The representations of the entities, attributes, and activities are not unique for a system. The representations depend upon the purpose of the system description. Based on the purpose of the system description, various aspects of the system will be of interest and will determine what needs to be identified. An example of a shipbuilding process can describe the concept well. If the whole shipbuilding process is considered, the materials, the equipment, the labor, and the processing departments might be entities. The attributes could represent such properties as labor rates, equipment quality, and the quantity of the materials. The activities could be shipbuilding processing procedures. However, if only the material handling process in a shipyard is considered, the entities can be restricted to only the materials, work stations and equipment. The same concept can be adopted when defining the attributes and activities.

In any system, values are used to represent the attributes qualitatively or quantitatively. The values of the attributes are called states. The analysis of a system

Table 1 Examples of Systems

systems	Entities	Attributes	Activities
Transportation	Buses	Speed Distance	Driving
Barber’s Shop	customers	Style	Hair Cut
Bank	customers	Balance Credit	Service
Supermarket	customers	Shipping List	Checking out
Maunfactuing	Materials	Quantity Quality	Processing

involves a study of its state changes as time elapses. This requires an understanding of the classifications of the systems.

One important distinction between systems is continuous and discrete systems. If the changes of the system state are predominantly smooth, the system is called a continuous system. If the changes of the system state are predominantly discontinuous, the system is called a discrete system. The river discharge system used as an example before is a continuous system, because the change of the discharge is predominantly smooth. The example of the factory system is a discrete system because the changes of the state, for example, the receiving of materials or the completion of a product, occur at specific points in time.

Few systems are completely continuous or discrete. Taking the factory system as an example again, machining proceeds continuously, even though the start and finish of a job are discrete changes. Because, in the factory system, the discrete type of change predominates, the system can usually be classified as being discrete.

Generally, a continuous system will be described in the form of continuous equations which represent how the system attributes change with time. On the other hand, a discrete system is described with the events producing changes in the state of the system. However the type of system is not necessarily coincident with the description. The study of a continuous system may sometimes be simplified by considering the changes to occur as a series of discrete steps. For example, the discharge of the river system can be defined as changes at a series of points in time. In addition, the discrete system usually is described simply by considering the changes of the system to occur continuously. The output of the factory may be described as a continuous variable over the time period of interest. Therefore, the description of the system does not coincide with the nature of the system, and the description must be concerned with the purpose of the study of the system.

Models of Systems

System studies are generally conducted with a model of the system. The objective of many system studies is to predict how a system will perform before it is built or to improve the operation of an existing system. It is not feasible to experiment with a system while it is in the hypothetical form. Although sometimes a number of prototypes of the system can be used and tested, these can be very expensive and time consuming. Even with an existing system, in most situations, it is impractical or impossible to experiment with the actual system. For example, it is not practical to test a whole material handling system of a

shipyard in order to know the economic material handling procedure and the corresponding handling equipment combinations. In fact, system studies are performed with a model of the system. A model of a system is a simplification and a substitution of the system.

The model contains the body of information about a system gathered for the purpose of studying the system. Since the structure of the model is based on the information gathered for the purpose of the studies, there is no unique model of a system. For example, if the material handling process for a shipbuilding system is to be studied, the gathered information of the system need only include the information which is relative to the handling process in the system.

Developing a model of a system may include two tasks: (1) establishing the model structure, and (2) supplying the data. Establishing the structure refers to the determination of the system boundaries and the identification of the system entities, attributes, and activities. The data to be provided are the values of the attributes and activities. The two tasks should be conducted together because they are interrelated to each other. Assumptions about the system are used to direct the data gathering, and the data confirm or refute the assumptions.

There are many ways to classify models [3]. Models can be classified as physical models, such as a scaled-down replica of a system, schematic models that include diagrams, maps, and charts, and symbolic models, of which those based on mathematics or computer code are the most common.

There are some other classifications of models. Mathematical models can be divided into analytical and numerical models. In an analytical model, a solution can be deduced from study of its mathematical representation. In a numerical model, a solution can be obtained only for specified numerical values of the parameters of the model by numerical methods.

Models can also be classified as static and dynamic models. If the models either omit a recognition of time or describe the state at a moment in time, they are static models. By contrast to static models, dynamic models acknowledge the passage of time.

Another distinction is deterministic versus stochastic models. In deterministic models, all the entities have a fixed mathematical or logical relationship to each other. A solution of the model can be determined by the relationships. In a stochastic model, at least a part of the variation exists randomly, as in nature.

shipyard in order to know the economic material handling procedure and the corresponding handling equipment combinations. In fact, system studies are performed with a model of the system. A model of a system is a simplification and a substitution of the system.

The model contains the body of information about a system gathered for the purpose of studying the system. Since the structure of the model is based on the information gathered for the purpose of the studies, there is no unique model of a system. For example, if the material handling process for a shipbuilding system is to be studied, the gathered information of the system need only include the information which is relative to the handling process in the system.

Developing a model of a system may include two tasks: (1) establishing the model structure, and (2) supplying the data. Establishing the structure refers to the determination of the system boundaries and the identification of the system entities, attributes, and activities. The data to be provided are the values of the attributes and activities. The two tasks should be conducted together because they are interrelated to each other. Assumptions about the system are used to direct the data gathering, and the data confirm or refute the assumptions.

There are many ways to classify models [3]. Models can be classified as physical models, such as a scaled-down replica of a system, schematic models that include diagrams, maps, and charts, and symbolic models, of which those based on mathematics or computer code are the most common.

There are some other classifications of models. Mathematical models can be divided into analytical and numerical models. In an analytical model, a solution can be deduced from study of its mathematical representation. In a numerical model, a solution can be obtained only for specified numerical values of the parameters of the model by numerical methods.

Models can also be classified as static and dynamic models. If the models either omit a recognition of time or describe the state at a moment in time, they are static models. By contrast to static models, dynamic models acknowledge the passage of time.

Another distinction is deterministic versus stochastic models. In deterministic models, all the entities have a fixed mathematical or logical relationship to each other. A solution of the model can be determined by the relationships. In a stochastic model, at least a part of the variation exists randomly, as in nature.

As computer technology developed, more and more models have been built to use digital computer simulations. These kinds of models are called simulation models. A simulation model is a mathematical and logical representation of a system which can be simulated in an experimental fashion on a digital computer [4].

Simulation models assume that a system can be described in terms that are acceptable to a computing system. If each combination of the variable values represents a unique state or condition in the system, the movement of the system from state to state then can be simulated by manipulating the variable values.

A simulation model is a laboratory version of a system. Experiments can be performed by running the model. Thus inferences about the system can be obtained "without building them, if they are only proposed systems; without disturbing them, if they are operating systems that are costly or unsafe to experiment with; or without destroying them, if the object of an experiment is to determine their limits of stress" [4].

A Bank Teller System Simulation

To illustrate the concept of simulation, a simple bank teller example is presented. Customers arrive at the bank and wait for service by the teller if the teller is busy. The waiting customers are in a single queue (or line) in front of the teller. The teller severs one customer at a time. After being served, the customer departs the system. Table 2 presents the time of the customer arrivals and the time of service for each customer. The question is to determine the percent of time the teller is idle and the average time a customer spends at the bank.

Since the state of the system is changed over time, the state of the system must be defined. For this example, the state of the system can be defined by the status of the teller (busy or idle) and by the number of the customers at the bank. The state of the system is changed when a customer arrives at the bank or departs from the bank after being served. Table 3 presents the time for each customer in the queue and at the bank. The average time in the queue is 2.66 minutes and the average time in the bank is 5.9 minutes for each customer. Table 4 presents the event-oriented description of the bank teller simulation. The event time is the time of arrival and departure of the customers. In Table 4, the events are listed in chronological order. From this table, it is indicated that the average number of customers at the bank in the first 40 minutes is 1.4775 and the teller is idle 19 percent of the time.

Table 2 Customer Arrival and Service Time

Customer Number	Time of Arrival (Minutes)	Service Time (Minutes)
1	3.1	3.8
2	10.8	3.4
3	14.1	4.5
4	14.8	4.7
5	17.8	2.2
6	20.0	2.1
7	21.5	3.0
8	26.5	2.7
9	32.4	2.6
10	36.5	3.5

Table 3 Manual Simulation of Bank Teller

Customer Number (1)	Arrival Time (2)	Start Service Time (3)	Departure Time (4)	Time in queue (5)=(3)-(2)	Time in Bank (6)=(4)-(2)
1	3.1	3.1	6.9	0.0	3.8
2	10.8	10.5	14.2	0.0	3.4
3	14.1	14.2	18.7	0.1	4.6
4	14.8	18.7	23.4	3.9	8.6
5	17.8	23.4	25.6	5.6	7.8
6	20.0	25.6	27.7	5.6	7.7
7	21.5	27.7	30.7	6.2	9.2
8	26.5	30.7	33.4	4.2	6.9
9	32.4	33.4	36.0	1.0	3.6
10	36.5	36.5	40.0	0.0	3.5

Table 4 Event-Oriented Description of Bank Teller Simulation

Event Time	Customer Number	Event Type	Number in Queue	Number in Bank	Teller Status	Teller Idle Time
0.0	-	Start	0	0	Idle	-
3.1	1	Arrival	0	1	Busy	3.1
6.9	1	Departure	0	0	Idle	
10.8	2	Arrival	0	1	Busy	3.9
14.1	3	Arrival	1	2	Busy	
14.2	2	Departure	0	1	Busy	
14.8	4	Arrival	1	2	Busy	
17.8	5	Arrival	2	3	Busy	
18.7	3	Departure	1	2	Busy	
20.0	6	Arrival	2	3	Busy	
21.5	7	Arrival	3	4	Busy	
23.4	4	Departure	2	3	Busy	
25.6	5	Departure	1	2	Busy	
26.5	8	Arrival	2	3	Busy	
27.7	6	Departure	1	2	Busy	
30.7	7	Departure	0	1	Busy	
32.4	9	Arrival	1	2	Busy	
33.4	8	Departure	0	1	Busy	
36.0	9	Departure	0	0	Idle	
36.5	10	Arrival	0	1	Busy	0.5
40.0	10	departure	0	0	Idle	

This example has illustrated several important concepts. At any instant in simulated time, the model is in a particular state. A state may change only at the event time. The state changes can be viewed from two perspectives: the customer's view and the teller's or the bank's view.

Simulation Modeling

There are two major tries of models that can be developed and used in simulation: (1) discrete simulation modeling and (2) continuous simulation modeling. For discrete simulation, the state of the system can change only at event time. A complete dynamic process of the system over time can be simulated by advancing simulated time from one event to the next. This time advance approach, timing mechanism, is used in most discrete simulation languages [4].

A discrete simulation model can be formulated by three different orientations, usually called world views. They are event orientation, defining the changes in state that occur at each event time; activity scanning orientation, describing the activities in which the entities in the system engage; and process orientation, describing the process through which the entities in the system flow.

In the event oriented world view, a system is modeled by determining the events that can change the state of the system and by developing the logic associated with each event time. The system is simulated by executing the logic associated with each event in a time ordered sequence.

As an example of the concept of the event oriented world view, consider the bank teller system again, which was an example described before. A customer arriving at the system may wait for service in a queue or is served immediately if the teller is idle. The state of the system is defined by the status of the teller and the number of waiting customers. The state is changed only at the point in time when a customer arrives at or departs from the system. The events of arrival and departure can be used to completely describe the dynamic structure of the system. The following statement outlines the logic and the associated arrival event logic [4]:

```
"SCHEDULE NEXT ARRIVAL
 IF THE TELLER IS BUSY: NUMBER WAITING = NUMBER
   WAITING + 1; RETURN
 IF THE TELLER IS IDLE: MAKE THE TELLER IS BUSY;
   SCHEDULE AN END OF SERVICE EVENT AT CURRENT TIME
   + SERVICE TIME; RETURN
 END"
```

The logic associated with the departure (end of Service) event is outlined as follows:

```
"IF THE NUMBER WAITING IS GREATER THAN O:
   NUMBER WAITING = NUMBER WAITING - 1;
  SCHEDULE END OF SERVICE EVENT AT CURRENT
   TIME + SERVICE TIME; RETURN
 IF THE NUMBER WAITING IS O: MAKE THE TELLER IDLE;
  RETURN
END"
```

A calendar of events is required for an event oriented simulation. The calendar initially contains the notice about the first arrival event. As the simulation proceeds, additional arrival events and end of service events will be scheduled onto the calendar according to the logic associated with the events. The events will be executed in a time-ordered sequence, and the simulation time has been advanced from one event to the next.

In the activity scanning oriented world view, the activities in which the entities engage are described, and the conditions which cause an activity to start or end are initiated from the conditions specified for the activity. As the simulated time is advanced, the conditions of either starting or ending an activity are scanned. The appropriate action for the activity is taken if the prescribed conditions are satisfied. Because it needs scanning for the entire set of activities at each time advance, the approach is relatively inefficient compared to the event-oriented world view, but this approach is particularly well suited if an activity duration is indefinite and is determined by the system state of satisfying a prescribed condition.

In the process-oriented world view, the simulation is oriented to the combined features of both the event orientation and the activity scanning orientation. As the entities move through a process, a sequence of events are automatically executed by the simulation language. A set of statements is used to model the flow of the entities through the systems. The following set of statements describes the process for the bank teller example [4]:

```
“CREATE ARRIVAL ENTITIES EVERY T TIME UNITS;
 AWAIT THE TELLER;
 ADVANCE THE TIME BY THE SERVICE TIME;
 FREE THE TELLER;
 TERMINATE THE ENTITY;"
```

Although each of the three above world views for a discrete model can be coded by using general purpose computer languages, a considerable amount of programming effort will be required. To reduce this difficulty, simulation languages have been developed to provide a simple

tool to code the model. GASP, SIMSCRIPT and SLAM II are the most commonly used languages in discrete event models. GPSS, SIMULA, Q-GERT, and SLAM II are commonly used process oriented languages.

In a continuous simulation model, the dependent variables, which represent the state of the system, are changed continuously over time. Continuous models are frequently written in terms of the difference of differential equations. These equations can be solved by digital computers using numerical analysis. A set of standards for continuous system-simulation languages (CSSL) has been developed by a committee of the Society of Computer Simulation.

For combined discrete-continuous models, the dependent variables of the system state may change both discretely and continuously. GASP IV, SMOOTH, SAINT, SIMSCRIPT, CROPS, and SLAM II are the languages that are capable of coding the combined simulation models.

Simulation Process

According to Shannon [5], there are ten steps for the simulation process. They are:

1. Problem formulation. The statement of the problem and the objective for the problem solving.

2. Model Building. The model abstracted from the system of interest.

3. Data acquisition. The process of data collection, identification, and specification.

4. Model translation. The coding of the model for computer processing.

5. Verification. The process of establishing that the computer program executes as it is designed.

6. Validation. The process of establishing that the simulation model is as accurate as the real system.

7. Strategic and tactical planning. The process of establishing the experimental conditions for the simulation runs.

8. Experimentation. The process of the simulation program execution to generate the values of the dependent variables.

9. Analysis of results. The process of analyzing the outputs and developing inferences and recommendations.

10. Implementation and documentation. The process of applying the results from the simulation and documenting the model and its use.

The first task in a simulation is to develop the problem statement. To find an acceptable solution to a problem, it must be known what the problem is. However, a clear and concise problem statement and the corresponding objectives are not always easy to develop. In many cases, management may not identify its own problem correctly. It recognizes that there is a problem, but what is the true problem is not identified. Therefore the system should be studied. In the study, a definition of the system must be produced first. Then the study within the defined system will be conducted. As additional insights into the problem are obtained and additional questions become of interest, the problem definition appears more clearly.

The task of formulating a model starts just after the accomplishment of the problem formulation. Formulating a model is to abstract the necessary essence of the system. In order to do this, the structure and the operating rules of the system must be fully understood. The model must define the elements and the characteristics of the system. The model must also describe the way in which the elements of the system interact to cause changes to the state of the system over time. The model should be easily understood, but sufficiently complex to represent the necessary characteristics of interest of the system. To simplify the model, a set of assumptions of the system will be developed during modeling.

AS the development of the model progresses, the independent variables of the model require data input. The collection of the data can involve considerable time and COST . Usually, the data input values are initially hypothesized or based on preliminary analysis. During the data acquisition process, formidable problems may occur. It may be difficult or even impossible to quantify or measure certain variables that are important to the behavior of the system. The data and the information needed may not be available, or perhaps not exist in the form required. In these situations, simplifying assumptions should be made, but they must be appropriate to the system in nature.

Once the model has been developed and the initial estimates of the input variables have been established, the next step is to transfer the model into a computer acceptable form. The simulation model can be programmed by using general purpose languages. General purpose languages such as FORTRAN, COBOL, BASIC, and C are designed to solve a broad class of problems. Special purpose languages, on the other hand, are designed to satisfy or solve a partical class or type of problem. Since the late 1950's when the

special purpose simulation languages began to be developed, significant improvement on the special purpose languages has been achieved. The simulation languages have many advantages for simulation. In addition to the savings of programming time, the simulation languages provide a brief, direct vehicle for expressing the concepts arising in a simulation study. The simulation language also can automatically generate certain data needed in simulation runs.

After the model has been coded in a computer language, the next step is verification. The verification task is to check the simulation programming and to ensure that the model is coded correctly. For a simple model, manual checking of calculations is a typical method of verification, but for a complex model, a series of debugging steps is required for a sequence of sections.

Validation is the process of establishing that a designed accuracy or correspondence exists between the simulation model and the real system. To validate a model means to develop an acceptable level of confidence that inferences drawn from the performance of the model are correct and applicable to the real world system. As this level is achieved, comparison tests should be conducted between model results and system results.

The process of strategic and tactical planning is to establish the experimental conditions for the simulation runs. The strategic Planning process is composed of developing an efficient experimental design to either explain the relationship between the simulation response and the input variables, or to find the combination of values for the input variables which either maximize or minimize the simulation response. During the process, a sensitivity analysis may proceed. The sensitivity analysis usually consists of systematically varying the values of the parameters or the input variables over some range of interest and observing the effect upon the model's response. The information drawn from the sensitivity analysis will be very helpful when management makes decisions. In contrast, tactical planning is concerned with how each of the simulation runs is conducted to find the most information from the data. Experimental design of the simulation run is a typical tool for planning the simulation runs. Starting conditions and variance reduction methods are the two specific issues for the simulation runs in tactical planning.

Experimentation and result analysis refer to executing the simulation program, gathering the outputs, and analyzing the results. The simulation program is used as an experimental laboratory. The program is executed according to the experimental design accomplished at the previous

step. The execution of the simulation and the data analysis may indicate the need for further work: changing the experimental design to explore interesting results, even reformulation of the problem [6]. Interpretation of the results of the analysis is required at the and of the process. The presentation of the results should be easily understandable. A concise and clear presentation will be helpful for management to make decisions.

The last step for a simulation process is implementation and documentation. The implementation is directly tied to the effectiveness of the simulation report. If the report presents the recommendations which are acceptable to management, the implementation should be easy. This indicates that both the model builder and the model user need to work closely together and they both need to understand the model and its use. If the model formulation and the assumptions are not effectively communicated, then the recommendations are hard to implemental. Reformulation of the problem and repeated evaluation may be involved. Finally, a well organized document is prepared to the user. A good documentation results in the maintenance of a computer coded program of a simulation model.

III. DATA BASE DEVELOPMENT

Initial consideration of the model to be employed to analyze the choice of material handling equipment was conducted based on an analysis of simulation as a general tool and on discussions with appropriate shipyard personnel. Since it was clear that data requirements and availability would be a key part of the ultimate model chosen, initial efforts were aimed at identifying and collecting the necessary data. It quickly became apparent that the data reqluired included the material handling equipment, the material to be moved and the facility, i.e. the locations to and from which material was to be moved.

Consequently, three data bases are required in order to analyze the material handling choices. These describe (1) the material handling equipment available, (2) the material to be moved, including time and location it is needed for the succeeding work operation, and (3) the facility layout, indicating the work stations to and from which material must be moved. The data bases will provide input data to the simulation model. Therefore, they must contain information in sufficient detail to permit valid analyses to be conducted. They should not, however, contain more detail than can be effectively used in the simulation. The actual flow of the simulation model proposed will be presented later in the report. However, there are certain prerequisites associated with each of these data bases.

Material Handling Equipment Data Base

The material handling equipment data base must contain information that will enable two major functions to be accomplished. First, the feasibility of using a particular piece of material handling equipment for a given move must be verified. This is a necessary condition for further consideration of the piece of equipment. The feasibility verification requires a determination that the equipment is capable of handling the weight, size and route required for the move. It also implies that the equipment is not currently being used for another move. The second function invovles making an optimum choice of available equipment based on a computation of the cost of using a particular piece of equipment. Since there are likely to be many possible choices, the simulation model should be run making different choices, so that these options can be compared after evaluating total project costs. The data categories for equipment must enable the model to determine these characteristics. Figures 1-5 show the heading categories for the files that comprise this data base. These files are for specific types of material handling equipment, including, bridge/gantry cranes, mobile cranes/crane trucks, jib cranes, transporters/trucks/rail cars, and forklifts. The first two columns are the individual equipment model and

Model	Name	Maximum Moving Capacity (ton)	Bridge Span (ft)	Moving Distance (ft)	Under Bridge (ft)	Travel Speed Loaded (mph)	Travel Speed Empty (mph)	Energy Type	Manu Code No	Labor Cost ($/hr)	Energy Cost ($/hr)	Maint Cost $	Emergency Down Cost ($)	Purchase Cost ($)
TDC (top running)	TDC1	3.00	25.00					E	1					
	TDC2	3.00	45.00					E	1					
	TD13	3.00	60.00					E	1					
	TDC4	5.00	25.00					E	1					
	DTC5	5.00	45.00					E	1					
	TDC6	5.00	60.00					E	1					
	TDC7	7.50	25.00					E	1					
	TDC8	7.50	45.00					E	1					
	TDC9	7.50	60.00					E	1					
	TDC10	10.00	25.00					E	1					
	TDC11	10.00	45.00					E	1					
	TDC12	10.00	60.00					E	1					
	TDC13	15.00	25.00					E	1					
	TDC14	15.00	45.00					E	1					
	TDC15	15.00	60.00					E	1					
USG (under running)	USG1	1.00	12.50					E	1					
	USG2	1.00	30.00					E	1					
	USG3	1.00	40.00					E	1					
	USG4	2.00	12.50					E	1					
	USG5	2.00	30.00					E	1					
	USG6	2.00	40.00					E	1					

Install Cost ($)	Interest Cost ($)

Figure 1 Bridge/Gantry Cranes

Model	Name	Capacity (ton)	Under Boom (ft)	Span (ft)	Maximum Height (ft)	Rotation (degree)	Travel Speed Loaded (mph)	Travel Speed Empty (mph)	Energy Type	Manu Code No.	Labor Cost ($/hr)	Energy Cost ($/hr)	Maint Cost $	Emergency Down Cost ($)	Purchase Cost ($)	Install Cost ($)	Interest Cost ($)
200-BPM	2001	0.25	10.00	8.00	10.58	360			E	1							
	2002	0.25	10.00	14.00	10.75	360			E	1							
	2003	0.25	10.00	20.00	10.92	360			E	1							
	2004	0.25	12.00	8.00	12.58	360			E	1							
	2005	0.25	12.00	14.00	12.75	360			E	1							
	2006	0.25	12.00	20.00	12.92	360			E	1							
	2007	0.50	10.00	8.00	10.58	360			E	1							
	2008	0.50	10.00	14.00	10.92	360			E	1							
	2009	0.50	10.00	20.00	11.08	360			E	1							
	2010	0.50	12.00	8.00	12.58	360			E	1							
	2011	0.50	12.00	14.00	12.92	360			E	1							
	2012	0.50	12.00	20.00	13.08	360			E	1							
	2013	1.00	10.00	8.00	10.75	360			E	1							
	2014	1.00	10.00	14.00	11.08	360			E	1							
	2015	1.00	10.00	20.00	11.33	360			E	1							
	2016	1.00	12.00	8.00	12.75	360			E	1							
	2017	1.00	12.00	14.00	13.08	360			E	1							
	2018	1.00	12.00	20.00	13.33	360			E	1							
	2019	1.50	10.00	8.00	10.92	360			E	1							
	2020	1.50	10.00	14.00	11.08	360			E	1							
	2021	1.50	10.00	20.00	11.58	360			E	1							

Figure 2 Mobile Cranes/Crane Trucks

Model	Name	Maximum Lifting At Max. Radius (ft)	Maximum Lifting At Min Radius (ft)	Rotation Degree	Mobile Method: tire rail, crawler	Highest Working Point Of Hook (ft)	Travel Speed Loaded (mph)	Travel Speed Empty (mph)	Energy Type	Manu Code No.	Labor Cost ($/hr)	Energy Cost ($/hr)	Maint Cost $
	3911001									3			
	3911002									3			
	3911003									3			
	3911004									3			
	3911005									3			
	3911006									3			
	3911007									3			
	3911008									5			
	3911009									5			
	3911010									5			
	3911011												
	3911012									3			
	3911013									3			
	3911014									3			
	3911015									3			
	3911016												
	3911017												
	3911018									5			
	3911019									5			
	3911020												
	3911021												

Emergency Down Cost ($)	Purchase Cost ($)	Install Cost ($)	Interest Cost ($)

Figure 3 Jib Cranes

Model	Name	Maximum Load Capacity (ton)	Width Of Platform (ft)	Length OF Platform (ft)	Height OF Platform (ft)	Width OF Equip (ft)	Length Of Equip (ft)	Minimum Turning Radius (ft)	Mobile Require. tire, rail, crawler	Travel Speed Loaded (mph)	Travel Speed Empty (mph)	Energy Type	Manu Code No.
	3906001												7
	3906002												7
	3906003												7
	3906004												7
	3906005												7
	3906006												7
	3906007												7
	3906008												7
	3906009												7
	3906010												7
	3906011												7
	3906012												7
	3906013												7
	3906014												7
	3906015												7
	3906016												7
	3906017												7
	3906018												7
	3906019												7
	3906020												7
	3906021												7

Labor Cost ($/hr)	Energy Cost ($/hr)	Maint Cost $	Emergency Down Cost ($)	Purchase Cost ($)	Install Cost ($)	Interest Cost ($)

Figure 4 Transporters/Trucks/Rail Cars

Model	Name	Max Lift Cape (ton)	Max Lift Ht (in)	Maximum Moving/ Reaching Capacity (ton)	Width Of Truck (in)	Length Of Truck (in)	Outside Turning Radius (in)	Travel Speed Loaded (mph)	Travel Speed Empty (mph)	Load Type: forward, backward	Road: special, hard, normal, any	Energy Type	Manu Code No.
GLC 040A	GL1	4.00	100.00		38.10	82.30	71.90	9.30	9.90	F	Tire	Gas	2
GLC 040A	GL2	4.00	140.00		38.10	82.30	71.90	9.30	9.90	F	Tire	Gas	2
GLC 040A	GL3	4.00	148.00		38.10	82.30	71.90	9.30	9.90	F	Tire	Gas	2
GLC 040A	GL4	4.00	168.00		38.10	82.90	71.90	9.30	9.90	F	Tire	Gas	2
GLC 040A	GL5	4.00	213.00		38.10	82.90	71.90	9.30	9.90	F	Tire	Gas	2
GP090M/GLP	GP1	9.00	96.00		56.10	132.00	110.20	13.40	14.90	F	Tire	Gas	2
GP090M/GLP	GP2	9.00	116.00		56.10	132.00	110.20	13.40	14.90	F	Tire	Gas	2
GP090M/GLP	GP3	9.00	136.00		56.10	132.00	110.20	13.40	14.90	F	Tire	Gas	2
GP090M/GLP	GP4	9.00	176.00		56.10	134.00	112.20	13.40	14.90	F	Tire	Gas	2
GP090M/GLP	GP5	9.00	206.00		56.10	134.00	112.20	13.40	14.90	F	Tire	Gas	2
GC 100L	GC1	10.00	96.00		45.30	103.90	90.90	11.00	11.50	F	Tire	Gas	2
GC 100L	GC2	10.00	116.00		45.30	103.90	90.90	11.00	11.50	F	Tire	Gas	2
GC 100L	GC3	10.00	136.00		45.30	103.90	90.90	11.00	11.50	F	Tire	Gas	2
GC 100L	GC4	10.00	139.00		45.30	103.90	90.90	11.00	11.50	F	Tire	Gas	2
GC 100L	GC5	10.00	146.00		45.30	105.20	90.90	11.00	11.50	F	Tire	Gas	2
GC 100L	GC6	10.00	176.00		45.30	105.20	90.90	11.00	11.50	F	Tire	Gas	2
GC 100L	GC7	10.00	206.00		45.30	105.20	90.90	11.00	11.50	F	Tire	Gas	2

Labor Cost ($/hr)	Energy Cost ($/hr)	Maint Cost $	Emergency Down Cost ($)	Purchase Cost ($)	Install Cost ($)	Interest Cost ($)

Figure 5 Forklifts

name. The next set of columns indicate handling capacities of the equipment. This data can be used to determine the material category classifications for which this piece of equipment may be used. The next column indicates the work station combinations (source and destination) which the equipment can service. The travel speed, used to indicate the length of time required for a given move is included next. This includes both loaded and empty travel speeds. The type of energy used is provided in the next column. There is also a category, indicated by a code, that directs the user to a file that describes the equipment manufacturer. Figure 6 is an example of this file. The remaining columns contain equipment specific cost data. These costs are described in detail in the section that presents the figure of merit formula. In order to indicate the potential size of these files, data from three shipyards was collected. This included two private shipyards and one public shipyard. Appendix I contains a complete listing for one of these shipyards. This listing would be subdivided into the five equipment file categories described above in order to be able to run the simulation and optimization program. Additionally, an attempt to develop a complete equipment manufacturer file was made. This file is shown in appendix II.

These files are used to develop a new file, called the potential equipment list. This file is contiunally updated for each move and over time during the simulation. A more detailed description of the flow of the simulation and the use of this file will be presented later. This file, an example of which is shown in Figure 7, also identifies the piece of equipment by name. It then has a capacity code to indicate the number of items within a material classification that can be handled by this piece of equipment. A column, updated throughout the execution of the simulation indicates the status of the equipment, including available, in use, or down. Another column indicates the location status, i.e. where a piece of equipment is located in the facility at a given time. This information is also updated during the simulation. Finally, a series of columns indicate the cost categories, including labor, energy, maintenance, down time, purchase, installation and debt service costs. The last column is the total cost associated with the use of a given piece of equipment up to the current time in the project (for a given simulation run). Note that while most of the data categories are constants, some are variables that are updated during the simulation and some may be stochastic, i.e. represented by a distribution. These variables are evaluated using typical random number generators during the running of the simulation. The optimization equation, used to compute total cost, is shown later in the report.

MFG CODE	MFG NAME	MFG TELEPGONE	MFG ADDRESS
1	STANSPEC CORP.	(216) 451-8900	13600 Deise Avenue Cleveland, Ohio 44110.
2	YALE	(206) 762-1777	Northwest, Inc. 7001 N.E. Columbia Boulevard, Portland OR 97218.
3	ACCO	(717) 843-1523	1110 East Princess Street, York, Pennsylvania 17403.
4	HARRINGTON	(800) 233-3010	401 West End Avenue, Manheim, PA 17545.
5	BAKER	(800) 627-1700	1 South Idaho Street, P.O. Box 3581, Seattle, WA 98124.
6	CUNNAN	(800) 228-4444	P.O. Box 82409, Lincoln, NE 68601.
7	INDUSTRIAL CRANE & EQUIP. CO.	(312) 378-0100	4701 West Iowa Street, Chicago, IL 60651.
8	CLYDE	(218) 722-7451	29th Avenue West & Michigan Street, Duluth, Minnesota 55806.
9	AMERICAN HOIST & DERRICK CO.	(612) 293-4567	63 South Robert Street, St Pul, Minnesota 55107.
10	AUTO CRANE COMPANY	(918) 438-2760	PO Box 581510, Tulsa, Oklahoma 74158.
11	LORAIN	(414) 873-3400	PO Box 422, Milwaukee, WI 53201.
12	NATIONAL CRANE	(402) 786-2240	11200 North 148th Street, Waverly, Nebraska 68462.
13	MITSUI ZOSEN (USA) INC.	(212) 308-3350	Suite 501, 405 Park Avenue, New York, NY 10022
14	GROVE	(717) 597-8121	PO Box 21, Shady Grove, Pennsylvania 17256.
15	HIAB CRANES & LOADERS INC.	(302) 328-5100	Airport Ind. Pk., 258 Quigley Blvd., New Castle, DE 19720.
16	MULTILIFT	(800) 821-9966	2000 S. Cherokee, Denver, Colorado 80223.
17	RPC CORP	(919) 599-3141	PO Box 451, Roxboro, North Carolina 27573.
18	STELCO INC.	(913) 287-1500	5500 Kansas Avenue, Kansas City, KS 66106.
19	LINK BELT	(312) 295-5500	2500 Lakeside Drive, Bannockburn, Illinois 60015.
20	NEI CLARKE CHAPMAN LTD.	(091) 477-1009	Victoria Works, Gateshead, Tyne & Wear NE8 3HS, UK.
21	WASHINGTON CRANES	(205) 622-4421	2925 First Avenue South, seattle, Wa 98134.

Figure 6 Manufacturers

Name	Capac Code	Location Status	Usage Status	Labor Cost $/hr	Energy Cost $/hr	Maint Cost $	Emergency Down Cost $	Purchase Cost $	Install Cost $	Interest Lost $	Total Lost $

Figure 7 Potential Equipment List

Material Class Data Base

Since the number and variation of individual items to be moved during a shipbuilding or major ship repair/overhaul project is extensive, a means of limiting the size of this data base to manageable proportions is required. In order to accomplish this, a material classification scheme is used. This scheme employs fifteen major classes, with the ability to subdivide the classes into sub-categories based on the specifics of the material handling problem. The classes include:

1. Structural raw materials
2. Outfitting raw materials
3. Pipe and tubing fittings and valves
4. Electrical system components
5. Hull and superstructure components
6. Fastening materials
7. Motors and pumps
8. Major equipment
9. Sheet metal components
10. Miscellaneous materials
11. Sub-assemblies (structural)
12. Outfit units
13. Sub-blocks
14. Blocks
15. Grand Blocks

There are specific sub-categories within the first ten major equipment categories. These are shown in Table 5. The assembly stage outputs (categories eleven through fifteen above) are primarily identified by the material handling constraints, including size, weight and special considerations [7,8].

Facility Layout Data Base

This data base is a direct function of the simulation software to be used. Most manufacturing simulation software packages include a simple structure for input of the facility layout. Consequently, no specific recommendations on the format of the iayout input are made in this phase of the research. Following development of a case study of the material handling simulation (phase II of the research), the specifics of inputting the layout will be explained.

Table 5 Material Classification Sub-Categories

Group 1: Structural Raw Materials

ITEM	NASSCO NO.	BIW NO.
Steel (plates and shapes)	82	40,41
Stainless Steel	83	
CRES and non-Ferrous (Except Aluminium) Plates and Sheets		42
CRES, Tool Steel and non-Ferrous (Except Aluminum) Bars and Shapes		43
Other Steel. Includes: Chrome-Moly, CU-Nl, Brass, etc.	84	
Manufactured Bill of Material Items (Tees, Angles)	85	
Metal (Ingots, Ores)	86	
Steel Inventory (Flat Bar, Round Bar, Small Shapes, etc.)	88	
Miscellaneous Surplus Steel	89	
Spec. Material	90	
Spec. Material	91	
Spec. Material	92	
Castings and Forgings		44
Aluminum (Plates and Shapes)	81	55,56

Group 2: Outfitting Raw Materials

ITEM	NASSCO NO.	BIW NO.
Pipe, Steel, ASTM A53	01	10
Pipe, Steel, ASTM A106, Chrome-Moly, Stainless Steel	02	10
Pipe, Aluminum, Copper, Brass, CU-NI, Misc.	03	10
Pipe, Plastic, Polyethylene, Nylon	04	10
Tubing, Stainless Steel	05	10
Tubing, Steel Carbon	06	10
Tubing, CU-NI, 90-10	07	10
Tubing, CU-NI, 70-30	08	10
Tubing, Copper, Brass, Misc.	09	10

Group 3: Pipe and Tubing Fittings and Valves

ITEM	NASSCO NO.	BIW NO.
Adapters, bushings, nipples	10	13,14
Caps, plugs, locknuts	11	13,14
Couplings, connectors	12	13,14
Elbows, 45°	13	13,14
Elbows, 90°	14	13,14
Flanges, expansion joints	15	15
Reducers, returns, inserts	16	13,14
Crosses, tees, laterals, branches	17	13,14
Unions	18	13,14
Deck drains, deck plates, refrigerator space drains	19	13,14
General plumbing fixtures and fittings includes: faucets, spouts, flush valves, "p" traps, water closets, etc.	20	18
Sockolets, elbolets, brazolets, nipolets, weldolets thredolets, latrolets, bosses, chill rings, couplets, tube fittings	21	
Tube fittings	22	13,14
Separators, traps, strainers, air-eliminators, filters, flame arrestors	23	
Gauges and gauge valves, liquid level and sight flow indicators, meters, regulators, thermometers, etc.	24	16,20
Aeroquip fittings and hose	25	20
Mechanical telegraph and voice tube fittings	27	17
Hose and hose fittings, emergency fresh air breathing apparatus, fire extinguishers, gas masks	29	
Angle valves	30	11,12
Butterfly valves	31	11,12
Measurflo control valves, liquid level control valves, temperature and pressure control valves, pressure reducing valves, solenoid valves	32	11,12
Gate valves	33	11,12
Globe valves	34	11,12
Cock valves	35	11,12
Relief valves	36	11,12
Check valves	37	11,12
Manifolds	38	11,12
Other valves includes: ball valves, scupper valves, eductors, vent terminal valves, vent check valves, plug valves, blow-off valves	39	11,12

Group 4: Electrical

ITEM	NASSCO NO.	BIW NO.
Cable and wire	60	25,26,27
Fittings and supplies, includes: packing assembly, wave guide bends, terminal blocks, connectors, caps, conduits, fuses, terminals, stiffing tubes, etc.	61	28,30
Connector boxes, flourescent light fixtures	62	
PIastic tape, braid	63	
Lighting (lamps)	64	28
Miscellaneous electric	65	
Coils and relays	66	
Switches and controllers, includes: circuit breakers	67	37
I.C. Equipment and parts	68	31,32
Navy symbol electrical, includes: feeder distribution boxes, fuse boxes, jack boxes, switch boxes, terminal boxes, indicater lights, light panels, receptacles, switches, pressure transducers, etc.	69	29,30
Wave grids and fittings		33
Power generation and transformation equipment		34
Instruments, electrical/electronics		35
Electronic compounds		38

Group 5: Hull and Superstructure Components

ITEM	NASSCO NO.	BIW NO.
Deck cleats, chocks, fairleads, hawse pipe material	40	
BIocks, sheaves	41	
Rigging material includes: clevis, hooks, shackles, snaps, links, turnbuckles, etc.	42	
Doors and closures	44	
Furniture and fixtures	45	
Anchoring devices stair treads, railing, gratings, etc.	48	
Laundry, barber shop, galley, messing and scullery equipment		4
Lumber	73	45
Medical and laboratory equipment and supplies		69
Off ice equipments furniture, supplies and ships outfit	79	71
Coverings, floor and deck		73

Group 6: Fastening Materials

ITEM	NASSCO NO.	BIW NO.
Bolts and studs	50	53
Nuts	51	53
Pins	52	53
Rivets	53	53
Screws	54	53
Washers	55	53
Weld rod, flux, solder	56	61
Tool S	78	80,81,82
Misc., includes: hangers, uristruts, clamps, sway braces	57	54
Gear and shifting boxes, couplings for flex shaft and rigid rods	59	
Rope, threads chain, twine, and wire (non-electrical)	43	50

Group M tors and Pumps

ITEM	NASSCO NO.	BIW NO.
Motors		90
Pumps		91

Group 8: Major Equipment

ITEM	NASSCO NO.	BIW NO.
Major equipment - Hull	94	97
Major equipment - Machinery	96	98
Major equipment - Electrical	93	99

Group 9. Sheet Metal Components

ITEM	NASSCO NO.	BIW NO.
Vent fittings		3
Air-Conditioning units and supplies, heaters, vent fittings, and ducting includes: intake and exhauset bellmouths, thermostats, spiral fittings, access covers, regulators, diffusers, ventillators, grills	28	93

Group 10. Miscellaneous Materials

ITEM	NASSCO NO.	BIW NO.
Chemicals, grease, oil, gases	70	60,62,63,64
Campounds, includes: adhesives cement, epoxy, etc.	71	49
Govermnent furnished material	74	
Paint	47	48
Insulation	46	57, 47
Cleaning supplies		72
Finishing, decorative materials and accessories		74
Vendor service items		86
Fabrics, plastics, glass, tapes		46
Safety and protective equipment		70

IV. SOFTWARE CHOICES

Three categories of software were investigated for potential incorporation in the model. These are for data base management, simulation and material handling. Although the use of packaged software is to be maximized, the model will need to provide interfaces and input/output capabilities developed specifically for this application. The final model configuration is presented later in the report. An attempt to determine if material handling system evaluation software existed was made initially. All listings of such software, including those contained in journals like INDUSTRIAL ENGINEERING [9] and MODERN MATERIALS HANDLING [10], indicted that the software was aimed at inventory control and warehousing, and not material handling. Consequently, it was clear that simulation software would be needed to model the material handling process.

In choosing software packages for use in the model, a number of criteria were applied. These criteria are based on qualitative evaluation, since the number, complexity and cost associated with individual testing of software packages would be prohibitive. The primary criteria to be used include (1) suitability of the software, or it's capability to handle the problem, (2) availability of the software, including it's cost, common usage in shipyards, general familiarity among computer users, and service and support by the software supplier, and (3) transferability of results between different users. An analysis of this type can significantly aid in making choices, while limiting the likelihood of selecting inappropriate software.

Data Base Management

The choice of software to be used in developing the data bases was made based on two primary factors. These are the ability of the data base software to perform the necessary functions, and the transferability of the software between shipyards. Consequently, a relatively powerful data base handling software package is required. Additionally, it must be a system that is readily available or already in common use. One such software system that satisfies these requirements is LOTUS 1-2-3 [11].

LOTUS 1-2-3 offers a typical spreadsheet approach to data base management. The software is readily available for PC operation on most commonly used machines. It provides ample space for the major data bases required, offering 256 columns and 8192 rows for data entry. The information required per piece of material handling equipment is considerably less than the 256 column capacity. Similarly, shipyards are not likely to have in excess of 8192 individual pieces of material handling equipment to be

managed and scheduled. The spreadsheet format is one with which most computer users are familiar. It is also quite powerful, providing considerable computational and sorting capability. Although it would certainly be easier to use the model with the specific software packages to be employed in it's development, the specific software packages chosen are not the only ones that would perform the necessary functions. Therefore, shipyards using other spreadsheet type software could continue to use that with the final model. The interface programs are the only parts that would need to be changed.

Simulation

There are many manufacturing simulation software packages available for consideration for use in optimizing material handling. Summaries of these packages are generally presented and updated annually by a number of journals. More than 50 such software packages are currently on the market. Consequently, choices cannot be made based on trials of these various packages. Again, simple criteria must be applied and choices made. The major criteria are flexibility, capability, availability and relative cost. Use of packages that are commonly used and readily available is prudent. Given this need to make a choice without the benefit of comparative testing, this recommendation is based on availability and common use. Most simulation packages that have been developed for manufacturing application using PCs are capable of dealing with the problem to be addressed in this research. Of the packages available, SLAM II, perhaps with the graphical add on package TESS is recommended [121]. This software is commonly available, has been used in numerous applications and is backed by an on-going support service. It is relatively easy to use and has both the power and flexibility needed to develop a material handling optimization simulation program for a shipyard. Should an individual shipyard have another standard simulation package available, switching from SLAM II should be relatively easy using the model developed in this and-the second phase of the research. Although there are many others, the primary simulation packages that were analyzed in addition to SLAM II were GPSS (General Purpose Simulation System) [13], SIMSCRIPT 11.5 [14] and SIMAN [15]. Detailed descriptions of each of these packages can be found in the references listed.

V. SIMULATION AND OPTIMIZATION MODEL DESIGN

The simulation and optimization model is designed as a general optimization model. As it is established, it can be used in any U.S. shipyard after some shipyard specific data have been input. These data entries can be made within the shipyards and by people involved in material handling scheduling and decision-making. There is no need for those doing this work to be either simulation experts or programmers. The major effort required is to input values in several data bases based on production schedules, the facility layout, and handling equipment available.

The material handling simulation and optimization model can be divided into four sections: (1) the material handling needs scheduling section, (2) the handing equipment selection section, (3) the handling process simulation section, and (4) the handling cost analysis and output section, as shown in Figure 8.

Work Schedule By Material Class

The material handling needs schedule is based on the material classification, the work schedule, and the facility layout. The function of this section is to generate the material handling schedule. The development of the material handling schedule is based on the information stored in two data bases: (1) the work schedule by material class, and (2) the facility layout data base. The work schedule by material class data base must include the following information:

(1) The weight (or the number of work pieces) of the materials to be handled, separated by material classification. This information must be specified by every work period, for example, by every shift. This tells the total weight (or the number) of material items to be handled per work period for each work station. Typical production indices (as developed for PWBS scheduling) would be used to determine these requirements, and would be presented as shown in Figure 9.

(2) Material handling equipment requirement codes. The codes could be specified according to the weight or the volume of the class of the materials that can be handled by a given piece of equipment. The codes are used to determine feasible material handling equipment choices per move.

(3) Sources and sinks of moves. These describe the work stations to and from which the materials move.

(4) The time at which material becomes available for movement at the present work station, the required time and the earliest receiving time at the following work stations.

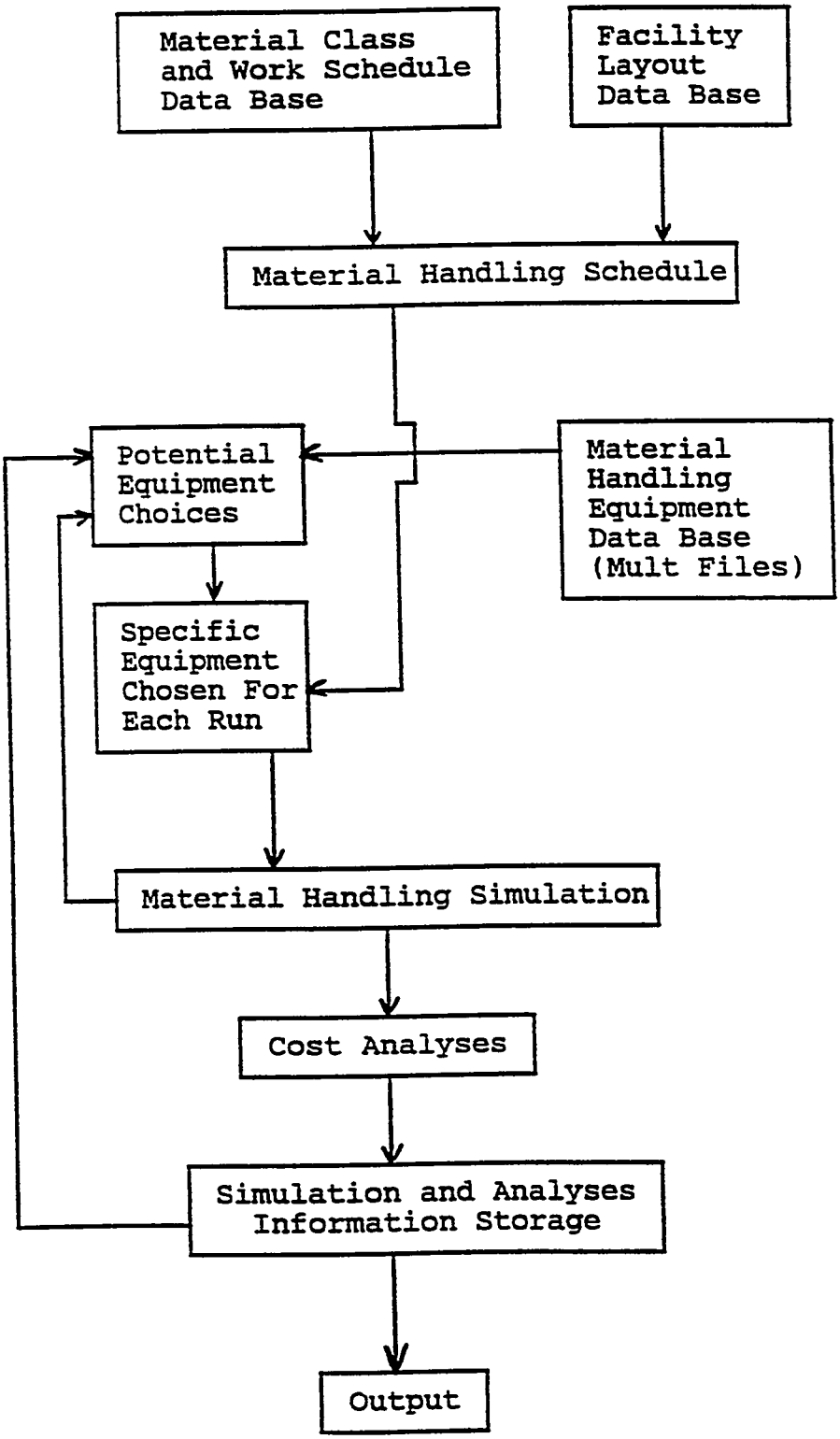

Figure 8 Simulation and Optimization Flow Chart

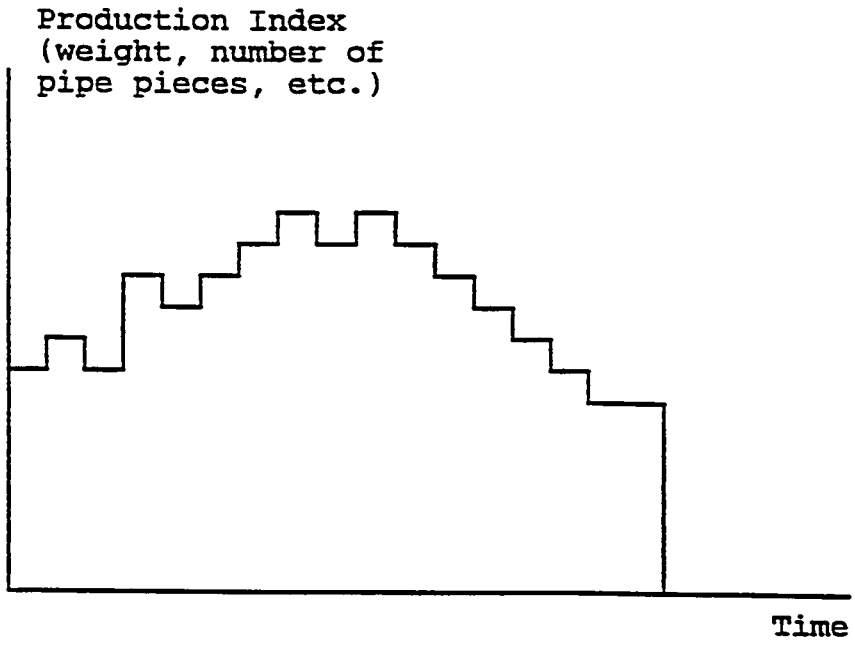

Figure 9 Material Movement Schedule

These values indicate the time period within which the materials should be moved to avoid causing sechedule delays.

Facility Layout Data Base

The facility layout data base provides the facility layout information to the model. The information includes:

(1) Work station codes or names. The codes are designed to identify the stations and the nearest adjacent stations.

(2) The distance between any two work stations. For a general model development, the distance information for all the work stations should be included, although the material handling process could not occur directly between some of the work stations.

(3) The possible handling equipment code between any two stations. This information is used to develop the potential equipment list, which will be described later.

These data are contained directly in the simulation program, which facilitates the input of the work station layout and location information.

Actual Material Handling Schedule

Based on the information from these two data bases, a handling schedule is developed. The handling schedule corresponds to each work period for all of the work stations. The schedule includes the following information:

(1) The total weight of material to be handled at a work station. At every work station, material is input and output at various work periods. The total weight to be handled at the station, including both input and output, indicates the minimum handling equipment capacity required at this station.

(2) The work piece handling code. The development of this code is the combination of (a) the equipment requirement code from the material class and work schedule data base and (b) the possible handling equipment code between any two work stations from the facility layout data base. The work piece handling code indicates possible handling equipment which can be used for handling the work piece between the two work stations.

(3) Handling sequence. There are several possible criteria from which to develop the handling sequence:

a) First requirement first handling.

b) First available first handling.

c) Material group handling.

d) Others.

Development of either a single strategy to be followed, or options for a choice of strategies will be necessary to automate this part of the model. Alternatively, interactive input at this section could permit the user to make these choices as a part of running the model.

The handling schedule chosen will be an input for the process simulation and a reference under which the specific handling equipment will be selected. The simulation will permit evaluation of alternative schedules, sequences and equipment choices.

Handling Equipment Selection

The handling equipment selection section consists of the material handling equipment data base, the potential equipment choices, and the specific equipment chosen for each run. The function of this section is to select the possible handling equipment and specify the equipment combinations for the handling process. The material handling equipment data base provides the equipment information to the model. The potential equipment are selected based on the feasibility of the use of a particular piece of equipment for a particular move and the availability of the equipment in the material handling equipment data base. For example, if the possible equipment code indicates that 40-ton fork lifts and 40-ton cranes can be used to handle a class of material from work station A to work station B, both of these kinds of equipment will be selected from the material equipment data base. Then, the availability of the equipment will be determined. In other words, the program will ascertain whether the equipment is already in use, is unavailable due to maintenance or breakdown needs, etc. The possible choices are then saved in a file. This file is called the potential equipment list. For every piece of material, there is a possible equipment code attached. The material handling equipment data base is searched by each of the possible equipment codes, and thus all of the potential equipment are selected. Then the cost and handling information for the selected equipment is transferred into the file. This file is used for the specific equipment combination selection for each simulation run.

In order to specify the equipment combination for each run, some rules must be developed. In the material handlinq simulation process, the number of equipment combinations must be limited. Some infeasible combinations should be

eliminated before actually simulating the handling process. Therefore, the rules for determining handling equipment combinations should be based several factors:

(1) Capacity.

Capacity considerations include: a) geometric and weight capacity, in that the equipment selected must be capable of handling the weight and geometric shape the work piece; b) total weight and distance, since the maximum handling capacity of a certain piece of equipment at a certain period of time may be limited when the distance is given; and c) maximum total transportation capacity, since many pieces of handling equipment may be assigned during the same period of time between two work stations and thus traffic congestion must be considered when selecting the equipment combination.

2) Handling Restrictions.

Some of the equipment will be eliminated from certain routes between work stations due to facility layout restrictions and by the method of handling the material.

3) Heuristics.

Heuristics will be developed to limit the simulation runs. Some of the materials can be handled by multiple kinds of equipment or by a number of the same type of equipment during the same period of time. Determining how to select the equipment requires that heuristics be developed.

Simulation

The material handling simulation section is used to simulate the material handling process. The function of this section is to model the material handling equipment flow during the entire project. During the simulation, the entities (materials) flow from station to station. The flow time between stations is the material handling time. Within each station, there is a constant or stochastic material processing time. The equipment flow, including loading time, transporting time, unloading time, and back traveling time, corresponds to the material flow. The finished materials wait at the present work station until a piece of handling equipment is available to move them to the next work station.

The handling sequence is developed at the material handling schedule section and the handling equipment is assigned at the handling equipment selection section. In the simulation model, the material handling equipment utilization is the dependent variable, while the loading, unloading, transporting and back traveling time for the

material handling equipment is the independent variable. The values of the independent variables must be input before the process is simulated. If the values of the variables are constant, the material utilization can be calculated according to the handling schedule and the equipment assignment. However, some or all of the variables may be stochastic values. They change from time to time. In order to know the average utilization for each piece of equipment, a simulation for the process is preferred. After each simulation run, the equipment utilization will be known.

The independent variables described above are also used for the approximate calculation in the handling equipment selection section. Suppose there were 100 tons of materials to be handled from work station A to work station B within a work period. After a calculation, it is known that two fork lifts can handle the materials at a work period. It is reasonable to assign two fork lifts to the job for a simulation run. The calculation for the assignment is not precise. However, after the simulation, the utilization of the equipment and the actual work time of the equipment will be obtained and will be used for the material handlina cost analysis.

Cost Analysis

The handling cost analysis and output section is the last section of the simulation and optimization model. The function of this section is to perform a material handling cost analysis and provide the most cost efficient material handling equipment assignment, and handling schedule. The material handling cost analysis is conducted by means of a figure of merit (cost) formulation. The cost formula consists of four cost categories. These include the labor cost, the energy cost, the emergency breakdown cost, and the cost of having the equipment available. The labor cost and the energy cost are proportional to the actual work time of the equipment, which is obtained after the simulation of the handling process. The last two cost categories may have relationships relative to the equipment actual work time also. Further investigation is required to understand these relationships.

After each of the process simulations and the cost calculations, the total cost will be compared with the costs from previous runs. Then, the cost and the equipment work schedule will be stored. Finally, a least total cost material handling equipment utilization schedule and several near least total cost equipment utilization schedules are printed.

Figure of Merit Formula

In order to evaluate optional choices of material handling equipment, a figure of merit (cost) formulation must be developed. Using this formula, applied to each move and the associated piece of material handling equipment used, a total cost of material handling equipment choices can be determined for a given plan. The total cost of various plans can then be compared. The cost formula computes cost in four basic categories. These include the labor cost associated with the use of a given piece of material handling equipment, the energy cost, the cost associated with "emergency" or unanticipated breakdowns of the equipment, and the cost of having the equipment available, including purchase, depreciation, scheduled maintenance, etc. These costs are combined on either an hourly use rate or over a total projected project duration and then summed for the project. The figure of merit formulation is given below.

Total Cost ($ /project) =

SUM (all moves) [labor cost * actual working time (hrs)
+ energy cost * actual working time (hrs)
+ emergency breakdown cost
+ ((purchase cost + installation cost) * depreciation coefficient + interest cost + maintenance cost) * project utilization coefficient (partial yearly usage of equipment on a specific project)]

where:

Labor Cost ($/hr) = Number of operators * Average wage/hour/operator

actual working time = travel time + load time + unload time

Energy Cost ($/hr) = cost per unit of energy type used * energy consumption at maximum output per hour * energy utilization coefficient

Maintenance Cost ($) = Constant or stochastic (distribution)

Emergency Breakdown Cost ($) = (1 - reliability coefficient)
* (delivery delay cost per/hr
+ inventory cost per hour
+ overtime cost per hour
+ idle time cost per hour)
* repair time (hrs),
stochastic (distribution)

Purchase Cost ($) = constant

Installation Cost ($) = direct installation cost
+ area utilization cost
+ additional facility (building)
construction cost

Interest Cost ($) = (purchase cost + installation cost)
* interest rate

The constant values must be input to the individual shipyard material handling equipment data base. Given these data, the simulation can then be run to provide a means of evaluating alternative choices of material handling equipment usage and scheduling. Note that in the total cost equation, labor and energy costs for a particular piece of equipment and a specific move must include unloaded moves (if required) to position the equipment where it is needed. The simulation model will account for this requirement. Additionally, capital costs (purchase and installation), must be based on present value computations.

An Example of A Material Handling Process Simulation

The following is a simple example of how the simulation and optimization process would work. For this example, there are five work stations. The processing time at each work station is denoted by Tpk, which is a random variable of a distribution, where k = 1, 2, 3, 4, or 5. The material handling time, Thij, is also a random variable with a known distribution, where Thij means the time required to handle a certain amount of material from station i to station j. The handling diagram is given as show in Figure 10. Si denotes the ith station; i = 1, 2, 3, 4, or 5. The material handling schedule is given in Figure 11. Mij means that M units will be handled from station Si to station Sj. The total weight of materials handled is 100 units for the whole project. The handling process is divided into three periods. At period one, 20 and 10 units of material are handled from station 1 to station 2 and 3 respectively. The 20 units of material moved to station 2 will be processed at station 2, and 10 units of them will be handled further to station 4 after processing. It is assumed that if the processing is conducted between any two of the handling

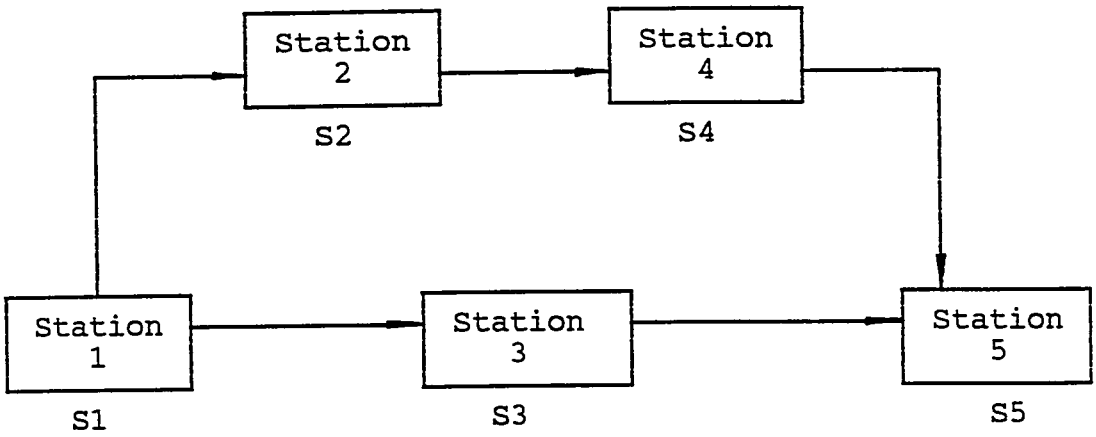

Figure 10 Material Handling Diagram

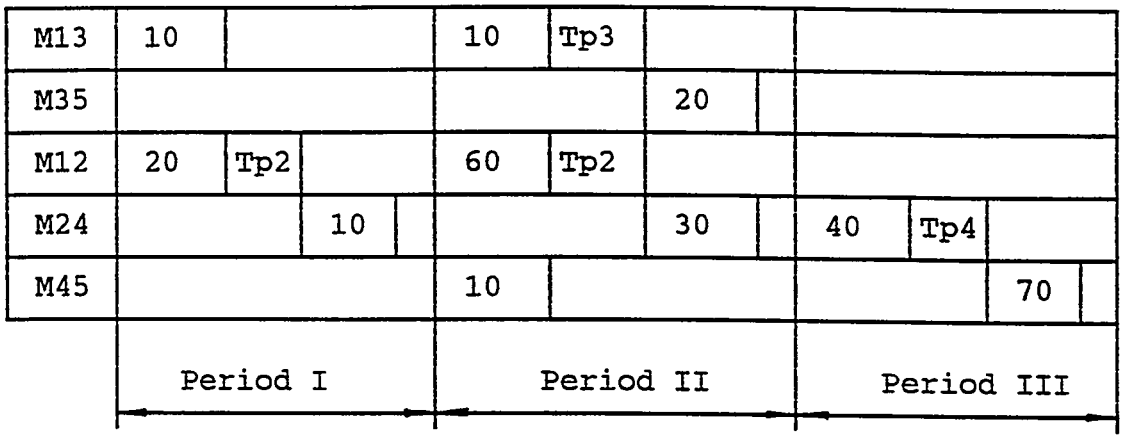

Figure 11 Material Handling Schedule

periods, the processing time is not considered by the material handling model. This case is true, when there is enough inventory space, and the material is not required by the next work station immediately after it is processed. Otherwise, the processing time must be considered. The processing time is denoted by Tpk.

There are two pieces of equipment, El and E2, available to perform the material handling tasks. E2 has a handling capacity of 1.4 times that of El. Three handling equipment assignment schedules are listed in Figures 12, 13, and 14, where sij denotes the handling process from station i to station j. It is assumed that the process is simulated by three runs for each of the three equipment assignment schedules. The results are shown in Figures 15, 16, and 17. Note that the variations in processing and handling times were arbitrarily chosen. The values of the cost formula parameters are listed in Figure 18. There are four cost categories in the Figure: labor cost, energy cost, emergency breakdown cost, and the cost associated with having the equipment available. It is assumed that the emergency breakdown cost is approximately zero because of the high maintenance costs for the equipment. It is also assumed that there are 150 work periods for the whole year. Therefore, the project utilization coefficient is P/150, where P denotes the number of periods of equipment utilization for this project. Figure 19 lists the total mean costs of the material handling process for each of the three handling equipment assignment schedules. Finally, the last two pages show an example of the cost calculation.

Period	Equipment	Handling Sequence
1	E1	S12-S13-S24
2	E1	S12-S13-S45-S31-S24
3	E1	S24-S45

Figure 12 Equipment Assignment Schedule I

Period	Equipment	Handling Sequence
1	E1	S12-S13-S24
2	E1	S12-S13-S45-S24
	E2	S12-S13-S35
3	E2	S24-S45

Figure 13 Equipment Assignment Schedule II

Period	Equipment	Handling Schedule
1	E1	S12-S13-S24
2	E2	S12-S13-S45-S35-S24
3	E2	S24-S45

Figure 14 Equipment Assignment Schedule III

Schedule I

Handling and Processing Times: Period 1

Sim Run	Th12	Tp2	Th13	Th24	Work Time	Work and Idle Time
1	4.0	1.5	2.0	1.0	7.0	7.0
2	3.0	2.0	1.5	1.5	6.0	6.5
3	2.0	2.5	3.0	2.0	7.0	7.0
Avg	3.0	2.0	2.17	1.5	6.67	6.67

Handling and Processing Times: Period 2

Sim Run	Th13	Tp3	Th12	Tp2	Th24	Th45	Th35	Work Time	Work & Idle Time
1	1.5	1.5	9.0	2.5	4.0	1.0	1.5	17.0	17.5
2	2.0	1.0	10.0	3.0	3.0	0.5	2.0	17.5	18.0
3	2.0	2.0	8.0	2.0	5.0	1.0	2.0	18.0	19.0
Avg	1.8	1.5	9.0	2.5	4.0	0.8	1.8	17.5	18.2

Handling and Processing Times: Period 3

Sim Run	Th24	Tp4	Th45	Work Time	Work & Idle Time
1	6.0	4.0	5.0	11.0	15.0
2	5.0	3.0	6.0	11.0	14.0
3	4.0	5.0	5.5	9.5	14.5
Avg	5.0	4.0	5.5	10.5	14.5

Thij = handling time from station i to j.
Tpk = processing time at station k.

Figure 15 Schedule I Handling and Processing Times

Schedule II

Handling and Processing Times: Period 1

Sim Run	Th12	Tp2	Th13	Th24	Work Time	Work & Idle Time
1	4.0	1.5	2.0	1.0	7.0	7.0
2	3.0	2.0	1.5	1.5	6.0	6.5
3	2.0	2.5	3.0	2.0	7.0	7.0
Avg	3.0	2.0	2.17	1.5	6.67	6.67

Handling and Processing Times: Period 2

Sim Run	Th13	Tp3	Th12	Tp2	Th24	Th45	Th35	E2		E1	
								Work Time	Work & Idle Time	Work Time	Work & Idle Time
1	0.6	1.0	3.7	3.0	3.0	0.5	1.0	5.3	6.3	7.8	9.7
2	0.7	1.5	4.2	2.5	4.0	1.0	1.4	6.3	7.8	9.9	10.7
3	0.8	2.0	3.3	2.0	5.0	1.0	1.5	5.6	7.6	10.1	10.3
Avg	0.7	1.5	3.6	2.5	4.0	0.8	1.3	5.6	7.1	9.2	10.1

Handling and Processing Times: Period 3

Sim Run	Th24	Tp4	Th45	Work Time	Work & Idle Time
1	4.2	3.0	3.5	7.7	10.7
2	4.0	4.0	3.0	7.0	11.0
3	3.8	5.0	4.0	7.8	12.8
Avg	4.0	4.0	3.5	7.5	11.5

Thij = handling time from station i to j.
Tpk = processing time at station k.

Figure 16 Schedule II Handling and Processing Times

Schedule III

Handling and Processing Times: Period 1

Sim Run	Thl 2	Tp2	Th13	Th24	Work Time	Work & Idle Time
1	4.0	1.5	2.0	1.0	7.0	7.0
2	3.0	2.0	1.5	1.5	6.0	6.5
3	2.0	2.5	3.0	2.0	7.0	7.0
Ave	3.0	2.0	2.17	1.5	6.67	6.67

Handling and Processing Times: Period 2

Sim Run	Th13	Tp3	Th12	Tp2	Th24	Th45	Th35	Work Time	Work & Idle Time
1	1.0	2.0	6.5	3.0	3.5	0.6	1.1	12.8	14.5
2	1.4	1.5	6.0	2.0	3.0	0.4	1.3	12.1	13.2
3	1.4	1.0	7.0	2.5	2.0	0.6	1.3	12.3	12.7
Avg	1.3	1.5	6.5	2.5	2.8	0.5	1.2	12.3	13.3

Handling and Processing Times: Period 3

Sim Run	Th24	Tp4	Th45	Work Time	Work & Idle Time
1	4.2	3.0	3.5	7.7	10.7
2	4.0	4.0	3.0	7.0	11.0
3	3.8	5.0	4.0	7.8	12.8
Avg	4.0	4.0	3.5	7.5	11.5

Thij = handling time from station i to j.
Tpk = processing time at station k.

Figure 17 Schedule III Handling and Processing Times

Items		El			E2		
1	Labor Cost $/hr	18.0			20.0		
2	Energy Cost $/hr	5.0			7.0		
3	Emergence Breakdown cost $	0.0			0.0		
4	Schedule	I	II	III	I	II	III
	Cost for Having Equipment $	130	87	43	-	127	127
	Periods of Equipment Used P	3	2	1	0	2	2
	Project Utilization Coefficient	P/150			P/150		
	Maintenance Cost $	1,500			2,000		
	Purchase Cost $	20,000			30,000		
	Installation Cost $	1,000			1,500		
	Interest Cost $	2,000			3,000		
	Depreciation Coefficient	1/7			1/7		

Figure 18 Cost Parameters

Equipment Assignment Schedule	Total Cost
I	1012.01
II	1058.91
III	958.01

Figure 19 Total Project Costs

Cost Calculation

I Cost for Having the Equipment

cost for Having the Equipment

= ((purchase cost + installation cost) * depreciation coefficient + interest cost + maintenance cost) * project utilization coefficient (partial yearly usage of equipment on a specific project)

Cost for having El

= ((20,000 + 1000) * (1/7) + 2,000 + 1,500) * (P/150)

= 130, P = 3
87, P = 2
43, P = l

Cost for having E2

= ((30,000 + 1,500) * (1/7) + 3,000 + 2,000) * (P/150)

= 0,P = 0
127, P = 2

II Handling Cost

Schedule I

Labour Cost ($):	(6.67 + 18.2 + 14.5) * 18 =	708.66
Energy Cost ($):	(6.67 + 17.5 + 10.5) * 5 =	173.35
Emergency Breakdown Cost ($):		0.00
Cost for Having the Equipment ($):		130.00
Total Cost ($):		1012.01

Schedule II

Labour Cost ($): (6.67 + 10.10) * 18 + (7.1 + 11.5) * 20 = 673.86

Energy Cost ($): (6.67 + 9.2) * 5 + (5.6 + 7.5) * 7 = 171.05

Emergency Breakdown Cost ($): = 0.00

Cost for Having the Equipment ($): 127 + 87 = 214.00

Total Cost ($): 1058.91

Schedule III

Labour Cost ($): 6.67 * 18 + (13.3 + 11.5) * 20 = 616.06

Energy Cost ($): 6.67 * 5 + (12.3 + 7.5) * 7 = 171.95

Emergency Breakdown Cost ($): = 0.00

Cost for Having the Equipment ($): 43 + 127 = 170.00

Total Cost ($): 958.01

VI. FEASIBILITY ANALYSIS

There are two primary issues of feasibility. The first involves the size and therefore running time of the model. The use of material categories and the scheduling parameters is a means of limiting the size of the simulation model. There are fifteen material categories, including the ten for specific individual material items, plus the five assembly categories. There are likely to be between 15 and 30 work station locations required to model the production process. This size model should be well within the capabilities of the PC based version of SLAM II recommended for use. Additionally, the material handling equipment data base should not be difficult to develop or handle. Similarly, the project schedule, if appropriately developed using the schedule parameter approach should also not be too large or cumbersome to handle. Clearly, the movement of every single item is not intended to be incorporated in the model. Rather, preplanned moves of equipment, manufactured parts and assemblies between work stations only are evaluated by this model. Thus the large frame material handling issues are involved. Subject to project specific needs, however, the model can be used to evaluate "critical" moves no matter what category (including size, weight, etc.) material is involved. Therefore, preplanning of moves is a prerequisite to the use of the model. The simulation model should be an effective tool to evaluate changes from the plan and to alter the material handling schedule to deal with such changes.

The second feasibility issue is more difficult to analyze prior to actually attempting to develop the model. This involves the heuristics development for making individual equipment choices. Heuristics can be extremely difficult to develop. This seems to become a more significant problem as they more closely model the actual decision process employed by an experienced decision-maker. In developing the simulation model, less meaningful but simple heuristics can be a useful starting point. The accuracy (utility) of the heuristics can then be increased incrementally until they are either satisfactory or the efficiency of the model begins to deteriorate significantly. While there is no assurance that such a set of heuristics can be obtained, the increasing success of such simulation modeling in other manufacturing environments provides some optimism [16, 17, 18].

VII. OTHER USES OF THE MODEL

There are a number of possible uses for the model proposed in this paper. The two primary areas of use involve material handling equipment decisions and scheduling. In the first area, the model should be effective in two significant areas. First, decisions on buying and selling material handling equipment can be justified by running the model with the material handling equipment data base appropriately changed. Benefits in cost and schedule will be readily apparent. Additionally, maintenance and breakdown records can be used to improve the accuracy of the data base, and then can be used to improve the scheduling of maintenance and prediction of breakdowns.

In the area of project scheduling, the model can be used to consider the impacts of schedule changes on material handling requirements and costs. Such an analysis can highlight bottleneck operations and therefore permit critical review of the manufacturing system. Similarly, the model can be used to evaluate the shipyard layout, and to provide material handling cost figures for layout alterations. The use of manufacturing simulation in other industries has lead to improvements in system problem identification and solution. This includes not only scheduling, equipment and layout, but also quality, batch size, labor utilization, etc. It is this author's belief that simulation holds similar promise for shipyard operations improvement.

VIII. FUTURE RESEARCH

In order to complete the development of a functioning, material handling simulation system, the following work must be accomplished:

1. Develop an interactive simulation program to produce a least cost material handling equipment schedule, based on equipment availability, production requirements, and the facility layout.

2. Develop and incorporate heuristics to perform internal decision-making within the simulation, as an augmentation and/or substitute to interactive decision-making.

3. Develop links between the results of the material handling simulation and planning, scheduling and production control functions.

4. Implement intelligent (AI based) simulation techniques to control material handling and to improve internal heuristics based on previous results.

The first two items above will enable shipyards to employ simulation as a tool to improve the scheduling of material handling operations. In particular, both short term and long term improvements can be expected. The third and fourth items above are longer term projects, with even more potential for improvement of material handling. The third item provides a feedback loop from the material handling group to planning and scheduling, permitting material handling considerations to be evaluated as a part of those functions. The fourth item leads to addressing the future prospects and power of simulation, i.e. artificial intelligence based simulation. This area appears to be the direction in which simulation is headed. Its application and power are contained in the ability of the computer program to learn from previous computer runs, producing improved planning outputs based solely on computer evaluation, without expensive, in the yard trial and error approaches. The first two items are contained within the scope of Phase II of this project. The third and fourth areas are longer term research possibilities.

IX. CONCLUSIONS

This report describes the results of the first phase of a two phase research project concerning the use of simulation to aid in the choice of material handling equipment for use in a shipbuilding or ship repair/overhaul project. Detailed is the outcome of attempts to carefully formulate the problem, both to indicate the data required and to evaluate the feasibility of producing software that would be useful to shipyard material handling department managers. Although only completion of phase II of the project can definitely establish the viability of simulation to solve this problem, the author is encouraged by these results. Additionally, while the size and scope of shipyard projects represents a significant problem in utilizing simulation~ it appears possible to handle a problem of this size, if it is formulated in the manner recommended. A key factor, as in any simulation, is the accuracy of input data. In particular, schedule and work progress parameter data must be valid in order to produce valid simulation results. Despite this potential difficulty, the use of simulation shows considerable promise as a tool to help reduce costs and improve planning of material handling operations in a shipyard.

The simulation model that has been formulated, and the data base structures are a significant initial step. This effort is the part of the process that requires innovation and abstraction. Since this phase of the research has been successfully completed, the remaining steps, while difficult, are less innovative. Therefore, there is a high likelihood that phase II would produce a workable product. Additionally, as described previously, a working simulation model of a shipbuilding or repair/overhaul project could be a powerful tool in process improvement.

There are some outputs of this phase of the work that can be useful immediately. The material classification system can help planners reduce the scope of other common shipyard tasks. It can provide a framework for material handling planners to address schedules without employing simulation. Secondly, the equipment manufacturers data base can be useful to maintenance and procurement people. Finally, the cost formulation can also be a helpful tool to material handling planners, aiding their thought process in making manual assignments, as is current practice. Naturally, the most significant potential benefits of this work require completion of phase II of the research.

X. REFERENCES

1. Pidd, M., Computer Simulation in Management Science, John Wiley & Sons, 1984.

2. Gordon, G., System Simulation, Prentice-Hall, Inc., 1969.

3. Fishman, G. S., Concepts and Methods in Discrete Event Digital Simulation, John Wiley & Sons, 1973.

4. Pritsker, A. B., Introduction to Simulation and SLAM II, A Halsted Press Book, John Wiley & Sons, 1984.

5. Shannon, R. E., Systems Simulation: The Art and Science, Prentice-Hall, 1975.

6. Emshoff, J. R., and Sisson, R. L., Design and Use of Computer Simulation Models, Macmillan, 1970.

7. Storch, R. L., and Alam, M. M., "Acceptance Sampling Procedures for U.S. Shipyards", Maritime Administration Report No. MA-RD-760-86002, November, 1985.

8. Storch,"R. L., Hammon, C. P., and Bunch, H. M., Ship Production, Cornell Maritime Press, 1988.

9. Law, A. M., and Haider, S. W., "Special Report: Simulation Software for Manufacturing", INDUSTRIAL ENGINEERING, Vol. 21, No. 5, May, 1989.

10. "Do More Simulation for Less on a PC: Software Selection Guide", MODERN MATERIALS HANDLING, Vol. 42, No. 10, September, 1987.

11. Lotus Development Corp., Lotus 1-2-3 Reference Manual and Tutorial, Cambridge, Mass., 1986.

12. O'Reilly, J. J., SLAM II Tutorial, Winter Simulation Conference, 1984.

13. Schriber, T. J., Introduction to GPSS, Winter Simulation Conference, 1984.

14. Russell, E. C., SIMSCRIPT II.5 Tutorial, Winter Simulation Conference, 1984.

15. Pegden, C. D., Introduction to SIMAN, Winter Simulation Conference, 1984.

16. Fredette, M. R., "Estimating Material Handling Equipment and Manpower Requirements for an Air Freight Ramp Operation Using SLAM II", MS Thesis, Air Force Institute of Technology, Wright-Patterson

AFB, OH, September, 1986.

17. Crum, J. A., “Simulating a Storage and Retrieval System Interfaced With an Automatic Guided Vehicle System”, Defense Construction Supply Center, OH, June, 1988.

18. Herring, B., “Simulation Helps Tire Manufacturer Change From Push to Pull System in Controlling Material Flow”, INDUSTRIAL ENGINEERING, Vol. 21, No. 2, February, 1989.

APPENDIX Al

MATERIAL HANDLING EQUIPMENT LIST

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3906001	T	O WB	100	602	CAT GEN COLL CHG NO	N/A	N/A (RE	BLDG & AREA -WB	TRANS CARS	
3906002	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3443	BLDG & AREA -WB	TRANS CARS	
3906003	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3379	BLDG & AREA -WB	TRANS CARS	
3906004	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3361	BLDG & AREA -WB	TRANS CARS	
3906005	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3431	BLDG & AREA -WB	TRANS CARS	
3906006	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3387	BLDG & AREA -WB	TRANS CARS	
3906007	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3457	BLDG & AREA -WB	TRANS CARS	
3906008	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3389	BLDG & AREA -WB	TRANS CARS	
3906009	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3096	BLDG & AREA -WB	TRANS CARS	
3906010	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3198	BLDG & AREA -WB	TRANS CARS	
3906011	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3308	BLDG & AREA -WB	TRANS CARS	
3906012	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3105	BLDG & AREA -WB	TRANS CARS	
3906013	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3336	BLDG & AREA -WB	TRANS CARS	
3906014	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3452	BLDG & AREA -WB	TRANS CARS	
3906015	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3155	BLDG & AREA -WB	TRANS CARS	
3906016	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3209	BLDG & AREA -WB	TRANS CARS	
3906017	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3065	BLDG & AREA -WB	TRANS CARS	
3906018	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3130	BLDG & AREA -WB	TRANS CARS	
3906019	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3396	BLDG & AREA -WB	TRANS CARS	
3906020	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3432	BLDG & AREA -WB	TRANS CARS	
3906021	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	N/A	BLDG & AREA -WB	TRANS CARS	
3906022	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3305	BLDG & AREA -WB	TRANS CARS	
3906023	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3296	BLDG & AREA -WB	TRANS CARS	
3906024	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3455	BLDG & AREA -WB	TRANS CARS	
3906025	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3381	BLDG & AREA -WB	TRANS CARS	
3906026	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3351	BLDG & AREA -WB	TRANS CARS	
3906027	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3349	BLDG & AREA -WB	TRANS CARS	
3906028	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3440	BLDG & AREA -WB	TRANS CARS	
3906029	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3414	BLDG & AREA -WB	TRANS CARS	
3906030	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3444	BLDG & AREA -WB	TRANS CARS	
3906031	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3458	BLDG & AREA -WB	TRANS CARS	
3906032	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3240	BLDG & AREA -WB	TRANS CARS	
3906033	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3205	BLDG & AREA -WB	TRANS CARS	
3906034	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3259	BLDG & AREA -WB	TRANS CARS	
3906035	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3287	BLDG & AREA -WB	TRANS CARS	
3906036	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3223	BLDG & AREA -WB	TRANS CARS	
3906037	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3333	BLDG & AREA -WB	TRANS CARS	
3906038	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3168	BLDG & AREA -WB	TRANS CARS	
3906039	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	N/A	BLDG & AREA -WB	TRANS CARS	
3906040	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3417	BLDG & AREA -WB	TRANS CARS	
3906041	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3494	BLDG & AREA -WB	TRANS CARS	
3906042	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3426	BLDG & AREA -WB	TRANS CARS	
3906043	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3427	BLDG & AREA -WB	TRANS CARS	
3906044	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906045	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3425	BLDG & AREA -WB	TRANS CARS	
3906046	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3423	BLDG & AREA -WB	TRANS CARS	
3906047	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3429	BLDG & AREA -WB	TRANS CARS	
3906048	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906049	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3353	BLDG & AREA -WB	TRANS CARS	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3906050	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906051	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3322	BLDG & AREA -WB	TRANS CARS	
3906052	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3329	BLDG & AREA -WB	TRANS CARS	
3906053	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	NO TAG	BLDG & AREA -WB	TRANS CARS	
3906054	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3477	BLDG & AREA -WB	TRANS CARS	
3906055	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906056	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3491	BLDG & AREA -WB	TRANS CARS	
3906057	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906058	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3488	BLDG & AREA -WB	TRANS CARS	
3906059	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3483	BLDG & AREA -WB	TRANS CARS	
3906060	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906061	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3323	BLDG & AREA -WB	TRANS CARS	
3906062	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3338	BLDG & AREA -WB	TRANS CARS	
3906063	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3373	BLDG & AREA -WB	TRANS CARS	
3906064	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3418	BLDG & AREA -WB	TRANS CARS	
3906065	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	N/A	BLDG & AREA -WB	TRANS CARS	
3906066	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3490	BLDG & AREA -WB	TRANS CARS	
3906067	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	N/A	BLDG & AREA -WB	TRANS CARS	
3906068	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3367	BLDG & AREA -WB	TRANS CARS	
3906069	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906070	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3360	BLDG & AREA -WB	TRANS CARS	
3906071	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3325	BLDG & AREA -WB	TRANS CARS	
3906072	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3326	BLDG & AREA -WB	TRANS CARS	
3906073	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3342	BLDG & AREA -WB	TRANS CARS	
3906074	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906075	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3412	BLDG & AREA -WB	TRANS CARS	
3906076	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906077	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	N/A	BLDG & AREA -WB	TRANS CARS	
3906078	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906079	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3345	BLDG & AREA -WB	TRANS CARS	
3906080	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3372	BLDG & AREA -WB	TRANS CARS	
3906081	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906082	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3317	BLDG & AREA -WB	TRANS CARS	
3906083	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3497	BLDG & AREA -WB	TRANS CARS	
3906084	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3499	BLDG & AREA -WB	TRANS CARS	
3906085	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906086	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3498	BLDG & AREA -WB	TRANS CARS	
3906087	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3504	BLDG & AREA -WB	TRANS CARS	
3906088	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3495	BLDG & AREA -WB	TRANS CARS	
3906089	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	N/A	BLDG & AREA -WB	TRANS CARS	
3906090	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906091	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906092	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3315	BLDG & AREA -WB	TRANS CARS	
3906093	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3310	BLDG & AREA -WB	TRANS CARS	
3906094	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	N/A	BLDG & AREA -WB	TRANS CARS	
3906095	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3368	BLDG & AREA -WB	TRANS CARS	
3906096	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3419	BLDG & AREA -WB	TRANS CARS	
3906097	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906098	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3485	BLDG & AREA -WB	TRANS CARS	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3906099	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3469	BLDG & AREA -WB	TRANS CARS	
3906100	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906101	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906102	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3472	BLDG & AREA -WB	TRANS CARS	
3906103	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906104	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3476	BLDG & AREA -WB	TRANS CARS	
3906105	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906107	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3364	BLDG & AREA -WB	TRANS CARS	
3906108	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3306	BLDG & AREA -WB	TRANS CARS	
3906109	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3380	BLDG & AREA -WB	TRANS CARS	
3906110	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906111	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906112	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	N/A	BLDG & AREA -WB	TRANS CARS	
3906113	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906114	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3346	BLDG & AREA -WB	TRANS CARS	
3906115	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906116	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906117	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906118	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3311	BLDG & AREA -WB	TRANS CARS	
3906119	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3299	BLDG & AREA -WB	TRANS CARS	
3906120	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3408	BLDG & AREA -WB	TRANS CARS	
3906121	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3407	BLDG & AREA -WB	TRANS CARS	
3906122	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906123	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906124	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3445	BLDG & AREA -WB	TRANS CARS	
3906125	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3348	BLDG & AREA -WB	TRANS CARS	
3906126	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3357	BLDG & AREA -WB	TRANS CARS	
3906127	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3385	BLDG & AREA -WB	TRANS CARS	
3906128	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906129	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3509	BLDG & AREA -WB	TRANS CARS	
3906130	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	N/A	BLDG & AREA -WB	TRANS CARS	
3906131	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3400	BLDG & AREA -WB	TRANS CARS	
3906132	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906133	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3442	BLDG & AREA -WB	TRANS CARS	
3906134	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3450	BLDG & AREA -WB	TRANS CARS	
3906135	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3401	BLDG & AREA -WB	TRANS CARS	
3906136	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906137	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906138	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3421	BLDG & AREA -WB	TRANS CARS	
3906139	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3435	BLDG & AREA -WB	TRANS CARS	
3906140	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906141	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3458	BLDG & AREA -WB	TRANS CARS	
3906142	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906143	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3354	BLDG & AREA -WB	TRANS CARS	
3906144	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906145	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906146	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906147	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906148	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3320	BLDG & AREA -WB	TRANS CARS	

SET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3906149	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906150	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3341	BLDG & AREA -WB	TRANS CARS	
3906151	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906152	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3343	BLDG & AREA -WB	TRANS CARS	
3906153	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3378	BLDG & AREA -WB	TRANS CARS	
3906154	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906155	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3493	BLDG & AREA -WB	TRANS CARS	
3906156	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3355	BLDG & AREA -WB	TRANS CARS	
3906157	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3340	BLDG & AREA -WB	TRANS CARS	
3906158	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906159	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	N/A	BLDG & AREA -WB	TRANS CARS	
3906160	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906161	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3453	BLDG & AREA -WB	TRANS CARS	
3906162	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3478	BLDG & AREA -WB	TRANS CARS	
3906163	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3297	BLDG & AREA -WB	TRANS CARS	
3906164	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906165	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3362	BLDG & AREA -WB	TRANS CARS	
3906166	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3359	BLDG & AREA -WB	TRANS CARS	
3906167	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906168	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906169	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3356	BLDG & AREA -WB	TRANS CARS	
3906170	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3391	BLDG & AREA -WB	TRANS CARS	
3906171	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3303	BLDG & AREA -WB	TRANS CARS	
3906172	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906173	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906174	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3383	BLDG & AREA -WB	TRANS CARS	
3906175	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3347	BLDG & AREA -WB	TRANS CARS	
3906176	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3343	BLDG & AREA -WB	TRANS CARS	
3906177	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3371	BLDG & AREA -WB	TRANS CARS	
3906178	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3309	BLDG & AREA -WB	TRANS CARS	
3906179	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3295	BLDG & AREA -WB	TRANS CARS	
3906180	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3437	BLDG & AREA -WB	TRANS CARS	
3906181	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3416	BLDG & AREA -WB	TRANS CARS	
3906182	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906183	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906184	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3436	BLDG & AREA -WB	TRANS CARS	
3906185	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3420	BLDG & AREA -WB	TRANS CARS	
3906186	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906191	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906192	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3501	BLDG & AREA -WB	TRANS CARS	
3906193	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3434	BLDG & AREA -WB	TRANS CARS	
3906194	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906195	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3463	BLDG & AREA -WB	TRANS CARS	
3906196	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3482	BLDG & AREA -WB	TRANS CARS	
3906197	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906198	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906199	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906200	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3506	BLDG & AREA -WB	TRANS CARS	
3906201	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3505	BLDG & AREA -WB	TRANS CARS	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3906202	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906203	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3479	BLDG & AREA -WB	TRANS CARS	
3906204	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3511	BLDG & AREA -WB	TRANS CARS	
3906205	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906206	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	N/A	BLDG & AREA -WB	TRANS CARS	
3906210	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3392	BLDG & AREA -WB	TRANS CARS	
3906211	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3460	BLDG & AREA -WB	TRANS CARS	
3906212	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3462	BLDG & AREA -WB	TRANS CARS	
3906213	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3456	BLDG & AREA -WB	TRANS CARS	
3906214	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3502	BLDG & AREA -WB	TRANS CARS	
3906215	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3500	BLDG & AREA -WB	TRANS CARS	
3906216	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906217	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906218	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3448	BLDG & AREA -WB	TRANS CARS	
3906219	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3447	BLDG & AREA -WB	TRANS CARS	
3906220	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3496	BLDG & AREA -WB	TRANS CARS	
3906221	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906222	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906223	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3513	BLDG & AREA -WB	TRANS CARS	
3906224	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906225	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906226	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3382	BLDG & AREA -WB	TRANS CARS	
3906227	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3363	BLDG & AREA -WB	TRANS CARS	
3906228	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906229	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3301	BLDG & AREA -WB	TRANS CARS	
3906300	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3283	BLDG & AREA -WB	TRANS CARS	
3906301	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906302	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3229	BLDG & AREA -WB	TRANS CARS	
3906303	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3061	BLDG & AREA -WB	TRANS CARS	
3906304	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906305	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3128	BLDG & AREA -WB	TRANS CARS	
3906306	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3212	BLDG & AREA -WB	TRANS CARS	
3906307	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3085	BLDG & AREA -WB	TRANS CARS	
3906308	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3178	BLDG & AREA -WB	TRANS CARS	
3906309	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906310	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906311	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3321	BLDG & AREA -WB	TRANS CARS	
3906312	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3184	BLDG & AREA -WB	TRANS CARS	
3906313	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3090	BLDG & AREA -WB	TRANS CARS	
3906314	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3082	BLDG & AREA -WB	TRANS CARS	
3906315	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906316	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3090	BLDG & AREA -WB	TRANS CARS	
3906317	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3208	BLDG & AREA -WB	TRANS CARS	
3906318	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906319	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3174	BLDG & AREA -WB	TRANS CARS	
3906320	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3175	BLDG & AREA -WB	TRANS CARS	
3906321	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3188	BLDG & AREA -WB	TRANS CARS	
3906322	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906323	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	

SSET JMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3906324	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3240	BLDG & AREA -WB	TRANS CARS	
3906325	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3101	BLDG & AREA -WB	TRANS CARS	
3906326	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3063	BLDG & AREA -WB	TRANS CARS	
3906327	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3161	BLDG & AREA -WB	TRANS CARS	
3906328	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3267	BLDG & AREA -WB	TRANS CARS	
3906329	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3159	BLDG & AREA -WB	TRANS CARS	
3906330	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3224	BLDG & AREA -WB	TRANS CARS	
3906331	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3220	BLDG & AREA -WB	TRANS CARS	
3906332	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3140	BLDG & AREA -WB	TRANS CARS	
3906333	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906334	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906335	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3186	BLDG & AREA -WB	TRANS CARS	
3906336	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3123	BLDG & AREA -WB	TRANS CARS	
3906337	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3146	BLDG & AREA -WB	TRANS CARS	
3906338	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3277	BLDG & AREA -WB	TRANS CARS	
3906339	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3284	BLDG & AREA -WB	TRANS CARS	
3906340	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906341	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3269	BLDG & AREA -WB	TRANS CARS	
3906342	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906343	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3269	BLDG & AREA -WB	TRANS CARS	
3906344	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3100	BLDG & AREA -WB	TRANS CARS	
3906345	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906346	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3165	BLDG & AREA -WB	TRANS CARS	
3906347	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3202	BLDG & AREA -WB	TRANS CARS	
3906348	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3149	BLDG & AREA -WB	TRANS CARS	
3906349	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3285	BLDG & AREA -WB	TRANS CARS	
3906350	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	2125	BLDG & AREA -WB	TRANS CARS	
3906351	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3265	BLDG & AREA -WB	TRANS CARS	
3906352	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3266	BLDG & AREA -WB	TRANS CARS	
3906353	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906354	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906355	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3096	BLDG & AREA -WB	TRANS CARS	
3906356	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3103	BLDG & AREA -WB	TRANS CARS	
3906357	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3153	BLDG & AREA -WB	TRANS CARS	
3906358	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3273	BLDG & AREA -WB	TRANS CARS	
3906359	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	2168	BLDG & AREA -WB	TRANS CARS	
3906360	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906361	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906362	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906363	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3222	BLDG & AREA -WB	TRANS CARS	
3906364	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906365	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906366	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3227	BLDG & AREA -WB	TRANS CARS	
3906367	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3104	BLDG & AREA -WB	TRANS CARS	
3906368	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3117	BLDG & AREA -WB	TRANS CARS	
3906369	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906370	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3191	BLDG & AREA -WB	TRANS CARS	
3906371	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3284	BLDG & AREA -WB	TRANS CARS	
3906372	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3276	BLDG & AREA -WB	TRANS CARS	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3906373	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3151	BLDG & AREA -WB	TRANS CARS	
3906374	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	NO TAG	BLDG & AREA -WB	TRANS CARS	
3906375	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3069	BLDG & AREA -WB	TRANS CARS	
3906376	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906377	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3072	BLDG & AREA -WB	TRANS CARS	
3906378	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3064	BLDG & AREA -WB	TRANS CARS	
3906379	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906380	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3180	BLDG & AREA -WB	TRANS CARS	
3906381	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3737	BLDG & AREA -WB	TRANS CARS	
3906382	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906383	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3185	BLDG & AREA -WB	TRANS CARS	
3906384	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906385	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3183	BLDG & AREA -WB	TRANS CARS	
3906386	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3250	BLDG & AREA -WB	TRANS CARS	
3906387	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906389	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3084	BLDG & AREA -WB	TRANS CARS	
3906390	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3089	BLDG & AREA -WB	TRANS CARS	
3906391	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3093	BLDG & AREA -WB	TRANS CARS	
3906392	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3252	BLDG & AREA -WB	TRANS CARS	
3906393	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3157	BLDG & AREA -WB	TRANS CARS	
3906394	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	6158	BLDG & AREA -WB	TRANS CARS	
3906395	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906396	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3176	BLDG & AREA -WB	TRANS CARS	
3906397	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906398	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3272	BLDG & AREA -WB	TRANS CARS	
3906399	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3325	BLDG & AREA -WB	TRANS CARS	
3906400	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906401	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3133	BLDG & AREA -WB	TRANS CARS	
3906402	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3076	BLDG & AREA -WB	TRANS CARS	
3906403	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906404	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3177	BLDG & AREA -WB	TRANS CARS	
3906405	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3078	BLDG & AREA -WB	TRANS CARS	
3906406	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3278	BLDG & AREA -WB	TRANS CARS	
3906407	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3060	BLDG & AREA -WB	TRANS CARS	
3906408	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3204	BLDG & AREA -WB	TRANS CARS	
3906409	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906410	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3207	BLDG & AREA -WB	TRANS CARS	
3906411	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3169	BLDG & AREA -WB	TRANS CARS	
3906412	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3092	BLDG & AREA -WB	TRANS CARS	
3906413	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906414	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3106	BLDG & AREA -WB	TRANS CARS	
3906415	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	4120	BLDG & AREA -WB	TRANS CARS	
3906416	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3067	BLDG & AREA -WB	TRANS CARS	
3906417	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906418	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3199	BLDG & AREA -WB	TRANS CARS	
3906419	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3142	BLDG & AREA -WB	TRANS CARS	
3906420	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3075	BLDG & AREA -WB	TRANS CARS	
3906421	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3073	BLDG & AREA -WB	TRANS CARS	
3906422	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3201	BLDG & AREA -WB	TRANS CARS	

SSET UMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3906423	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3119	BLDG & AREA -WB	TRANS CARS	
3906424	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3066	BLDG & AREA -WB	TRANS CARS	
3906425	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3033	BLDG & AREA -WB	TRANS CARS	
3906426	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3196	BLDG & AREA -WB	TRANS CARS	
3906427	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3200	BLDG & AREA -WB	TRANS CARS	
3906428	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3243	BLDG & AREA -WB	TRANS CARS	
3906429	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3108	BLDG & AREA -WB	TRANS CARS	
3906431	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3210	BLDG & AREA -WB	TRANS CARS	
3906432	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3122	BLDG & AREA -WB	TRANS CARS	
3906433	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3213	BLDG & AREA -WB	TRANS CARS	
3906434	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906435	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906436	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3110	BLDG & AREA -WB	TRANS CARS	
3906437	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3241	BLDG & AREA -WB	TRANS CARS	
3906438	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3154	BLDG & AREA -WB	TRANS CARS	
3906439	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3214	BLDG & AREA -WB	TRANS CARS	
3906440	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3231	BLDG & AREA -WB	TRANS CARS	
3906441	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3263	BLDG & AREA -WB	TRANS CARS	
3906442	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3058	BLDG & AREA -WB	TRANS CARS	
3906443	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3116	BLDG & AREA -WB	TRANS CARS	
3906444	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3121	BLDG & AREA -WB	TRANS CARS	
3906445	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3074	BLDG & AREA -WB	TRANS CARS	
3906446	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3216	BLDG & AREA -WB	TRANS CARS	
3906447	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3218	BLDG & AREA -WB	TRANS CARS	
3906448	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906449	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906450	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906451	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3230	BLDG & AREA -WB	TRANS CARS	
3906452	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3126	BLDG & AREA -WB	TRANS CARS	
3906453	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906454	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3225	BLDG & AREA -WB	TRANS CARS	
3906455	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906456	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3262	BLDG & AREA -WB	TRANS CARS	
3906457	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3266	BLDG & AREA -WB	TRANS CARS	
3906458	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3261	BLDG & AREA -WB	TRANS CARS	
3906459	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3249	BLDG & AREA -WB	TRANS CARS	
3906460	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906461	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906462	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906463	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906464	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3197	BLDG & AREA -WB	TRANS CARS	
3906465	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906466	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906467	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906468	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906469	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3342	BLDG & AREA -WB	TRANS CARS	
3906470	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906471	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3226	BLDG & AREA -WB	TRANS CARS	
3906472	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3077	BLDG & AREA -WB	TRANS CARS	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3906473	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3228	BLDG & AREA -WB	TRANS CARS	
3906474	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3170	BLDG & AREA -WB	TRANS CARS	
3906475	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3144	BLDG & AREA -WB	TRANS CARS	
3906476	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906477	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3115	BLDG & AREA -WB	TRANS CARS	
3906478	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3236	BLDG & AREA -WB	TRANS CARS	
3906479	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3147	BLDG & AREA -WB	TRANS CARS	
3906480	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3143	BLDG & AREA -WB	TRANS CARS	
3906481	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906482	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3054	BLDG & AREA -WB	TRANS CARS	
3906483	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3275	BLDG & AREA -WB	TRANS CARS	
3906484	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3256	BLDG & AREA -WB	TRANS CARS	
3906485	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906486	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906487	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3141	BLDG & AREA -WB	TRANS CARS	
3906488	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3102	BLDG & AREA -WB	TRANS CARS	
3906489	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906490	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3239	BLDG & AREA -WB	TRANS CARS	
3906491	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906492	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3083	BLDG & AREA -WB	TRANS CARS	
3906493	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3281	BLDG & AREA -WB	TRANS CARS	
3906494	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3068	BLDG & AREA -WB	TRANS CARS	
3906495	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3135	BLDG & AREA -WB	TRANS CARS	
3906496	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3195	BLDG & AREA -WB	TRANS CARS	
3906497	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3192	BLDG & AREA -WB	TRANS CARS	
3906498	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906499	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906500	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3134	BLDG & AREA -WB	TRANS CARS	
3906501	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3121	BLDG & AREA -WB	TRANS CARS	
3906502	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906503	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3058	BLDG & AREA -WB	TRANS CARS	
3906504	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906505	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906506	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906507	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906508	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3253	BLDG & AREA -WB	TRANS CARS	
3906509	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3267	BLDG & AREA -WB	TRANS CARS	
3906510	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906511	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3112	BLDG & AREA -WB	TRANS CARS	
3906512	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906513	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906514	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906515	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3280	BLDG & AREA -WB	TRANS CARS	
3906516	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906517	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906518	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906519	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3215	BLDG & AREA -WB	TRANS CARS	
3906520	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3173	BLDG & AREA -WB	TRANS CARS	
3906521	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3114	BLDG & AREA -WB	TRANS CARS	

SET MBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
906522	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
906523	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3107	BLDG & AREA -WB	TRANS CARS	
906524	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3245	BLDG & AREA -WB	TRANS CARS	
906525	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3182	BLDG & AREA -WB	TRANS CARS	
906526	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
906527	X	C WB	100	818	TRANSLATION CAR, NON-PW	GREER HYD	N/A	(MOBLDG & AREA -WB	TRANS CARS	
906528	X	C WB	100	818	TRANSLATION CAR, NON-PW	GREER HYD	N/A	(MOBLDG & AREA -WB	TRANS CARS	
906600	X	C WB	100	818	JACKING CAR	WESTERN GEAR	129	BLDG & AREA -WB	TRANS CARS	
906601	X	C WB	100	818	JACKING CAR	WESTERN GEAR	154	BLDG & AREA -WB	TRANS CARS	
906602	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
906603	X	C WB	100	818	JACKING CAR	WESTERN GEAR	141	BLDG & AREA -WB	TRANS CARS	
906604	X	C WB	100	818	JACKING CAR	WESTERN GEAR	143	BLDG & AREA -WB	TRANS CARS	
906605	X	C WB	100	818	JACKING CAR	WESTERN GEAR	B118	BLDG & AREA -WB	TRANS CARS	
906606	X	C WB	100	818	JACKING CAR	WESTERN GEAR	156	BLDG & AREA -WB	TRANS CARS	
3906607	X	C WB	100	818	JACKING CAR	GREER HYD E505	109	BLDG & AREA -WB	TRANS CARS	
3906608	X	C WB	100	818	JACKING CAR	GREER HYD E505	141	BLDG & AREA -WB	TRANS CARS	
3906609	X	C WB	100	818	JACKING CAR	GREER HYD E505	161	BLDG & AREA -WB	TRANS CARS	
3906610	X	C WB	100	818	JACKING CAR	GREER HYD E505	124	BLDG & AREA -WB	TRANS CARS	
3906611	X	C WB	100	818	JACKING CAR	GREER HYD E505	3025	BLDG & AREA -WB	TRANS CARS	
3906612	X	C WB	100	818	JACKING CAR	GREER HYD E505	128	BLDG & AREA -WB	TRANS CARS	
3906613	X	C WB	100	818	JACKING CAR	GREER HYD E505	114	BLDG & AREA -WB	TRANS CARS	
3906614	X	C WB	100	818	JACKING CAR	GREER HYD E505	3028	BLDG & AREA -WB	TRANS CARS	
3906615	X	C WB	100	818	JACKING CAR	GREER HYD E505	111	BLDG & AREA -WB	TRANS CARS	
3906616	X	C WB	100	818	JACKING CAR	GREER HYD E505	138	BLDG & AREA -WB	TRANS CARS	
3906617	X	C WB	100	818	JACKING CAR	GREER HYD E505	132	BLDG & AREA -WB	TRANS CARS	
3906618	X	C WB	100	818	JACKING CAR	GREER HYD E505	102	BLDG & AREA -WB	TRANS CARS	
3906619	X	C WB	100	818	JACKING CAR	GREER HYD E505	101	BLDG & AREA -WB	TRANS CARS	
3906620	X	C WB	100	818	JACKING CAR	GREER HYD E505	101	BLDG & AREA -WB	TRANS CARS	
3906621	X	C WB	100	818	JACKING CAR	GREER HYD E505	148	BLDG & AREA -WB	TRANS CARS	
3906622	X	C WB	100	818	JACKING CAR	GREER HYD E505	106	BLDG & AREA -WB	TRANS CARS	
3906623	X	C WB	100	818	JACKING CAR	GREER HYD E505	153	BLDG & AREA -WB	TRANS CARS	
3906624	X	C WB	100	818	JACKING CAR	GREER HYD E505	108	BLDG & AREA -WB	TRANS CARS	
3906625	X	C WB	100	818	JACKING CAR	GREER HYD E505	120	BLDG & AREA -WB	TRANS CARS	
3906626	X	C WB	100	818	JACKING CAR	GREER HYD E505	3005	BLDG & AREA -WB	TRANS CARS	
3906627	X	C WB	100	818	JACKING CAR	GREER HYD E505	116	BLDG & AREA -WB	TRANS CARS	
3906628	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906629	X	C WB	100	818	JACKING CAR	GREER HYD E505	B121	BLDG & AREA -WB	TRANS CARS	
3906630	X	C WB	100	818	JACKING CAR	GREER HYD E505	B101	BLDG & AREA -WB	TRANS CARS	
3906631	X	C WB	100	818	JACKING CAR	GREER HYD E505	106	BLDG & AREA -WB	TRANS CARS	
3906632	X	C WB	100	818	JACKING CAR	GREER HYD E505	B111	BLDG & AREA -WB	TRANS CARS	
3906633	X	C WB	100	818	JACKING CAR	GREER HYD E505	108	BLDG & AREA -WB	TRANS CARS	
3906634	X	C WB	100	818	JACKING CAR	GREER HYD E505	B122	BLDG & AREA -WB	TRANS CARS	
3906635	X	C WB	100	818	JACKING CAR	GREER HYD E505	B103	BLDG & AREA -WB	TRANS CARS	
3906636	X	C WB	100	818	JACKING CAR	GREER HYD E505	B116	BLDG & AREA -WB	TRANS CARS	
3906637	X	C WB	100	818	JACKING CAR	GREER HYD E505	B110	BLDG & AREA -WB	TRANS CARS	
3906638	X	C WB	100	818	JACKING CAR	GREER HYD E505	121	BLDG & AREA -WB	TRANS CARS	
3906639	X	C WB	100	818	JACKING CAR	GREER HYD E505	112	BLDG & AREA -WB	TRANS CARS	
3906640	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906700	X	C WB	100	818	JACKING CAR	GREER HYD E505	112	BLDG & AREA -WB	TRANS CARS	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3906701	X	C WB	100	818	JACKING CAR	GREER HYD E505	139	BLDG & AREA -WB	TRANS CARS	
3906702	X	C WB	100	818	JACKING CAR	GREER HYD E505	151	BLDG & AREA -WB	TRANS CARS	
3906703	X	C WB	100	818	JACKING CAR	GREER HYD E505	111	BLDG & AREA -WB	TRANS CARS	
3906704	X	C WB	100	818	JACKING CAR	GREER HYD E505	103	BLDG & AREA -WB	TRANS CARS	
3906705	X	C WB	100	818	JACKING CAR	GREER HYD E505	123	BLDG & AREA -WB	TRANS CARS	
3906706	X	C WB	100	818	JACKING CAR	GREER HYD E505	105	BLDG & AREA -WB	TRANS CARS	
3906707	X	C WB	100	818	JACKING CAR	GREER HYD E505	149	BLDG & AREA -WB	TRANS CARS	
3906708	X	C WB	100	818	JACKING CAR	GREER HYD E505	146	BLDG & AREA -WB	TRANS CARS	
3906709	X	C WB	100	818	JACKING CAR	GREER HYD E505	152	BLDG & AREA -WB	TRANS CARS	
3906710	X	C WB	100	818	JACKING CAR	GREER HYD E505	145	BLDG & AREA -WB	TRANS CARS	
3906711	X	C WB	100	818	JACKING CAR	GREER HYD E505	132	BLDG & AREA -WB	TRANS CARS	
3906712	X	C WB	100	818	JACKING CAR	GREER HYD E505	144	BLDG & AREA -WB	TRANS CARS	
3906713	X	C WB	100	818	JACKING CAR	GREER HYD E505	121	BLDG & AREA -WB	TRANS CARS	
3906714	X	C WB	100	818	JACKING CAR	GREER HYD E505	136	BLDG & AREA -WB	TRANS CARS	
3906715	X	C WB	100	818	JACKING CAR	GREER HYD E505	133	BLDG & AREA -WB	TRANS CARS	
3906716	X	C WB	100	818	JACKING CAR	GREER HYD E505	131	BLDG & AREA -WB	TRANS CARS	
3906717	X	C WB	100	818	JACKING CAR	GREER HYD E505	125	BLDG & AREA -WB	TRANS CARS	
3906718	X	C WB	100	818	JACKING CAR	GREER HYD E505	130	BLDG & AREA -WB	TRANS CARS	
3906719	X	C WB	100	818	JACKING CAR	GREER HYD E505	111	BLDG & AREA -WB	TRANS CARS	
3906720	X	C WB	100	818	JACKING CAR	GREER HYD E505	115	BLDG & AREA -WB	TRANS CARS	
3906721	X	C WB	100	818	JACKING CAR	GREER HYD E505	131	BLDG & AREA -WB	TRANS CARS	
3906722	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906723	X	C WB	100	818	JACKING CAR	GREER HYD E505	135	BLDG & AREA -WB	TRANS CARS	
3906724	X	C WB	100	818	JACKING CAR	GREER HYD E505	110	BLDG & AREA -WB	TRANS CARS	
3906725	X	C WB	100	818	JACKING CAR	GREER HYD E505	126	BLDG & AREA -WB	TRANS CARS	
3906726	X	C WB	100	818	JACKING CAR	GREER HYD E505	116	BLDG & AREA -WB	TRANS CARS	
3906727	X	C WB	100	818	JACKING CAR	GREER HYD E505	104	BLDG & AREA -WB	TRANS CARS	
3906728	X	C WB	100	818	JACKING CAR	GREER HYD E505	B115	BLDG & AREA -WB	TRANS CARS	
3906729	X	C WB	100	818	JACKING CAR	GREER HYD E505	102	BLDG & AREA -WB	TRANS CARS	
3906730	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906731	X	C WB	100	818	JACKING CAR	GREER HYD E505	B113	BLDG & AREA -WB	TRANS CARS	
3906732	X	C WB	100	818	JACKING CAR	GREER HYD E505	107	BLDG & AREA -WB	TRANS CARS	
3906733	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906734	X	C WB	100	818	JACKING CAR	GREER HYD E505	B114	BLDG & AREA -WB	TRANS CARS	
3906735	X	C WB	100	818	JACKING CAR	GREER HYD E505	105	BLDG & AREA -WB	TRANS CARS	
3906736	X	C WB	100	818	JACKING CAR	GREER HYD E505	B119	BLDG & AREA -WB	TRANS CARS	
3906737	X	C WB	100	818	JACKING CAR	GREER HYD E505	117	BLDG & AREA -WB	TRANS CARS	
3906738	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3350	BLDG & AREA -WB	TRANS CARS	
3906739	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3321	BLDG & AREA -WB	TRANS CARS	
3906740	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3375	BLDG & AREA -WB	TRANS CARS	
3906741	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3466	BLDG & AREA -WB	TRANS CARS	
3906742	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3134	BLDG & AREA -WB	TRANS CARS	
3906743	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3291	BLDG & AREA -WB	TRANS CARS	
3906744	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3335	BLDG & AREA -WB	TRANS CARS	
3906745	X	C WB	100	818	TRANSLATION CAR	WESTERN GEAR	3099	BLDG & AREA -WB	TRANS CARS	
3906746	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906800	X	C WB	100	818	JACKING CAR	GREER HYD E505	164	BLDG & AREA -WB	TRANS CARS	
3906801	X	C WB	100	818	JACKING CAR	GREER HYD E505	114	BLDG & AREA -WB	TRANS CARS	
3906802	X	C WB	100	818	JACKING CAR	GREER HYD E505	184	BLDG & AREA -WB	TRANS CARS	

SET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3906803	X	C	WB 100	818	JACKING CAR	GREER HYD E505	142	BLDG & AREA -WB	TRANS CARS	
3906804	X	C	WB 100	818	JACKING CAR	GREER HYD E505	160	BLDG & AREA -WB	TRANS CARS	
3906805	X	C	WB 100	818	JACKING CAR	GREER HYD E505	3403	BLDG & AREA -WB	TRANS CARS	
3906806	X	C	WB 100	818	JACKING CAR	GREER HYD E505	3302	BLDG & AREA -WB	TRANS CARS	
3906807	X	C	WB 100	818	JACKING CAR	GREER HYD E505	151	BLDG & AREA -WB	TRANS CARS	
3906808	X	C	WB 100	818	JACKING CAR	GREER HYD E505	186	BLDG & AREA -WB	TRANS CARS	
3906809	X	C	WB 100	818	JACKING CAR	GREER HYD E505	162	BLDG & AREA -WB	TRANS CARS	
3906810	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3314	BLDG & AREA -WB	TRANS CARS	
3906811	X	C	WB 100	818	JACKING CAR	GREER HYD E505	158	BLDG & AREA -WB	TRANS CARS	
3906812	X	C	WB 100	818	JACKING CAR	GREER HYD E505	159	BLDG & AREA -WB	TRANS CARS	
3906813	X	C	WB 100	818	JACKING CAR	GREER HYD E505	111	BLDG & AREA -WB	TRANS CARS	
3906814	X	C	WB 100	818	JACKING CAR	GREER HYD E505	189	BLDG & AREA -WB	TRANS CARS	
3906815	X	C	WB 100	818	JACKING CAR	GREER HYD E505	181	BLDG & AREA -WB	TRANS CARS	
3906816	X	C	WB 100	818	JACKING CAR	GREER HYD E505	143	BLDG & AREA -WB	TRANS CARS	
3906817	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906879	X	C	WB 100	818	TRANSLATION CAR	WESTERN GEAR	3094	BLDG & AREA -WB	TRANS CARS	
3906880	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906900	X	C	WB 100	818	JACKING CAR	GREER HYD E505	310	BLDG & AREA -WB	TRANS CARS	
3906901	X	C	WB 100	818	JACKING CAR	GREER HYD E505	3124	BLDG & AREA -WB	TRANS CARS	
3906902	X	C	WB 100	818	JACKING CAR	GREER HYD E505	161	BLDG & AREA -WB	TRANS CARS	
3906903	X	C	WB 100	818	JACKING CAR	GREER HYD E505	190	BLDG & AREA -WB	TRANS CARS	
3906904	X	C	WB 100	818	JACKING CAR	GREER HYD E505	3148	BLDG & AREA -WB	TRANS CARS	
3906905	X	C	WB 100	818	JACKING CAR	GREER HYD E505	168	BLDG & AREA -WB	TRANS CARS	
3906906	X	C	WB 100	818	JACKING CAR	GREER HYD E505	163	BLDG & AREA -WB	TRANS CARS	
3906907	X	C	WB 100	818	JACKING CAR	GREER HYD E505	110	BLDG & AREA -WB	TRANS CARS	
3906908	X	C	WB 100	818	JACKING CAR	GREER HYD E505	113	BLDG & AREA -WB	TRANS CARS	
3906909	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906910	X	C	WB 100	818	JACKING CAR	GREER HYD E505	3091	BLDG & AREA -WB	TRANS CARS	
3906911	X	C	WB 100	818	JACKING CAR	GREER HYD E505	113	BLDG & AREA -WB	TRANS CARS	
3906912	X	C	WB 100	818	JACKING CAR	GREER HYD E505	183	BLDG & AREA -WB	TRANS CARS	
3906913	X	C	WB 100	818	JACKING CAR	GREER HYD E505	166	BLDG & AREA -WB	TRANS CARS	
3906914	X	C	WB 100	818	JACKING CAR	GREER HYD E505	3079	BLDG & AREA -WB	TRANS CARS	
3906915	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EN/WN YARD	TRANS CARS	
3906916	X	C	WB 100	818	JACKING CAR	GREER HYD E505	119	BLDG & AREA -WB	TRANS CARS	
3907001	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EB/WB YARD	TRANS CARS	
3908001	T	C	EB 200	406	18 TON	BROWN HOIST DE 3	12257	BLDG & AREA -EB	RAIL CRANES	IIPDR
3908002	T	C	EB 200	406	15 TON	BROWN HOIST DE 3	12281	BLDG & AREA -EB	RAIL CRANES	3580R
3908003	T	C	EB 200	406	18 TON	BROWN HOIST DE 3	12282	BLDG & AREA -EB	RAIL CRANES	IIPDR
3908004	T	C	WB 100	406	18 TON	BROWN HOIST DE 3	12280	BLDG & AREA -WB	RAIL CRANES	3347R
3908005	T	C	WB 100	331	15 TON	BROWN HOIST DE 3	9028	BLDG & AREA -WB	RAIL CRANES	3579R
3908006	T	C	EB 200	406	11 TON	AMERICAN	L-3771	BLDG & AREA -EB	RAIL CRANES	
3908007	T	C	WB 0	999	OVERHAUL (SPARES)	N/A	LABOR OUNASSIGNED		RAIL CRANES	9999R
3908008	T	C	EB 200	890	18 TON	BROWN HOIST DE 3	12257	BLDG & AREA -EB	RAIL CRANES	3757R
3908009	T	C	EB 200	890	18 TON	BROWN HOIST DE 3	12282	BLDG & AREA -EB	RAIL CRANES	3292R
3908010	T	C	WB 138	406	40/10 TON RAIL CRANE	OHIO LOCOMOTIVE*	5163	PLATE STORAGE	RAIL CRANES	
3908011	T	C	WB 138	406	40/10 TON RAIL CRANE	OHIO LOCOMOTIVE*	5170	PLATE STORAGE	RAIL CRANES	
3908012	T	C	WB 100	406	10TON LOCOMOTIVE CRANE	OHIO LOCOMOTIVE*	5188	BLDG & AREA -WB	RAIL CRANES	
3909001	T	C	WB 100	602	UNASSIGNED	N/A	N/A	BLDG & AREA -WB	HANDLING BOXES	
3909002	T	O	WB 100	851	FAB.(10)ALUMINUM MATL	N/A COLLECTION B	N/A	BLDG & AREA -WB	HANDLING BOXES	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3909003	T	O	WB 100	816	FABRICATE KEEL BLOCKS	N/A AND STEEL BO	N/A	BLDG & AREA -WB	HANDLING BOXES	
3910001	T	C	WB 100	0	COURIER CAR	N/A	H72-240	BLDG & AREA -EB	COURIER CARS	01287R
3910002	T	C	WB 100	0	COURIER COR	N/A	H72-240	BLDG & AREA -WB	COURIER CARS	01633R
3911000	T	O	WB 100	602	DIRECT MATL COLLECTION	N/A	GEN PRU	BLDG & AREA -WB	MOBILE CRANES	
3911001	T	C	EB 200	406	25 TON C-1	GROVE RT62S	3438	BLDG & AREA -WB	MOBILE CRANES	
3911002	T	C	WB 100	406	25 TON C-2	GROVE RT62S	3924	BLDG & AREA -WB	MOBILE CRANES	
3911003	T	C	WB 100	406	25 TON C-3	GROVE RT62S	3906	BLDG & AREA -WB	MOBILE CRANES	
3911004	T	C	WB 100	406	25 TON C-4	GROVE RT62S	16517	BLDG & AREA -WB	MOBILE CRANES	
3911005	T	C	WB 100	406	25 TON C-5	GROVE RT62S	16717	BLDG & AREA -WB	MOBILE CRANES	
3911006	T	C	WB 100	0	6 TON C-6	GROVE 35B	4171	BLDG & AREA -WB	MOBILE CRANES	01289R
3911007	T	C	WB 100	0	6 TON C-7	GROVE 35B	4190	BLDG & AREA -WB	MOBILE CRANES	01290R
3911008	T	C	WB 100	331	50 TON TRUCK C-8	AMERICAN	GS11130	BLDG & AREA -WB	MOBILE CRANES	3875R
3911009	T	C	WB 100	406	40 TON TRUCK C-9	AMERICAN	GS94541	BLDG & AREA -WB	MOBILE CRANES	IIPD
3911010	T	C	WB 100	406	60 TON TRUCK C-10	AMERICAN	GS8300	BLDG & AREA -WB	MOBILE CRANES	3760R
3911011	T	C	EB 200	406	41.9 TON C-11	P&H	31003	BLDG & AREA -EB	MOBILE CRANES	3691R
3911012	T	C	EB 200	406	C-12 20 TON (30)	GROVE RT65S	23234	BLDG & AREA -EB	MOBILE CRANES	
3911013	T	C	WB 100	602	C-13 25 TON (30)	GROVE RT65S	23519	BLDG & AREA -WB	MOBILE CRANES	01732R
3911014	T	C	EB 200	406	C-14 30 TON	GROVE RT65S	23950	BLDG & AREA -EB	MOBILE CRANES	
3911015	T	C	EB 200	406	C-15 30 TON	GROVE RT65S	23626	BLDG & AREA -EB	MOBILE CRANES	
3911016	T	C	WB 100	406	6 TON GO DEVIL	DROTT	1104	BLDG & AREA -WB	MOBILE CRANES	
3911017	T	C	WB 100	406	C-11 4 TON GO DEVIL	DROTT	2190	BLDG & AREA -WB	MOBILE CRANES	
3911018	T	C	EB 200	406	16.6 TON STEEDER	AMERICAN	GS-1129	BLDG & AREA -EB	MOBILE CRANES	IIPD
3911019	T	C	WB 100	602	LOADER	AMERICA 399BC	GS11736	BLDG & AREA -WB	MOBILE CRANES	9999R
3911020	T	C	EB 200	406	CHRRY PICKER	AUSTIN WESTERN	P15948	BLDG & AREA -EB	MOBILE CRANES	
3911021	T	C	EB 200	406	CHERRY PICKER	AUSTIN WESTERN	T210-10	BLDG & AREA -EB	MOBILE CRANES	2012R
3911022	T	C	WB 100	331	007 15 TON CRAWLER	AMERICAN	GS11734	BLDG & AREA -WB	MOBILE CRANES	3122R
3911023	T	C	WB 100	406	140,900 LB 8150	LORAIN	34597	BLDG & AREA -WB	MOBILE CRANES	
3911024	T	C	EB 200	406	SPEEDER 28'RAD 6.6 TON	AMERICAN	GS11319	BLDG & AREA -EB	MOBILE CRANES	2677R
3911025	T	C	WB 100	0	25 TON CRAWLER	NORTHWEST 280	26623-4	BLDG & AREA -WB	MOBILE CRANES	01186R
3911026	T	C	WB 100	331	10 TON STEEDER	AMERICAN	GS11321	BLDG & AREA -WB	MOBILE CRANES	3577R
3911027	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BLDG & AREA -WB	MOBILE CRANES	
3911028	T	C	WB 100	406	55 TON	AMERICAN	GS18517	BLDG & AREA -WB	MOBILE CRANES	
3911029	T	C	WB 100	331	55 TON	AMERICAN	GS18519	BLDG & AREA -WB	MOBILE CRANES	
3911030	T	C	WB 100	406	55 TON	AMERICAN	GS18521	BLDG & AREA -WB	MOBILE CRANES	
3911031	T	C	WB 100	406	7.5 TON 1977	GROVE	39910	BLDG & AREA -WB	MOBILE CRANES	
3911032	T	C	WB 200	331	CRAWLER 40 TON 1977	AMERICAN	GS18641	BLDG & AREA -EB	MOBILE CRANES	
3911033	T	C	WB 100	331	40 TON CRAWLER CRANE	AMERICAN	GS18643	BLDG & AREA -WB	MOBILE CRANES	
3911034	T	C	WB 100	406	10 TON MOBILE CRANE 197	GROVE	40045	BLDG & AREA -WB	MOBILE CRANES	
3911035	T	C	WB 100	406	1978 35 TONS	GROVE	42142	BLDG & AREA -WB	MOBILE CRANES	
3911036	T	C	WB 0	999	OVERHAUL (SPARES)	N/A	LABOR OUNASSINGED		MOBILE CRANES	9999R
3911037	T	C	WB 100	406	155 TON TRUCK CRANE	MANITIWOC	399064	BLDG & AREA -WB	MOBILE CRANES	
3911038	T	C	WB 100	406	40 TON HYDRAULIC CRANE	GROVE	50228	BLDG & AREA -WB	MOBILE CRANES	
3911039	T	C	EB 230	406	40 TON HYDRAULIC CRANE	GROVE	50352	TRANS OFF	MOBILE CRANES	
3911040	T	C	WB 100	406	40 TON HYDRAULIC CRANE	GROVE	50353	BLDG & AREA -WB	MOBILE CRANES	
3911041	T	C	WB 100	406	100 TON TRUCK CRANE	LINK BELT MOD.	18TH2-2	BLDG & AREA -WB	MOBILE CRANES	
3911042	T	C	EB 200	890	40 TON TRUCK C-9	AMERICAN	GS94541	BLDG & AREA -EB	MOBILE CRANES	3982R
3911043	T	C	EB 200	890	16.6 TON SPEEDER	AMERICAN	GS11290	BLDG & AREA -EB	MOBILE CRANES	3581R
3911044	T	C	WB 114	406	87 45 TON HYD.CRANE	GROVE	69996	TRANSPORTATION	MOBILE CRANES	
3911045	T	C	WB 114	406	87 45 TON HYD.CRANE	GROVE	69997	TRANSPORTATION	MOBILE CRANES	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3911046	T	C	WB	114	406 87 45 TON HYD.CRANE	GROVE	69998	TRANSPORTATION	MOBILE CRANES	
3911047	T	C	WB	114	406 87 45 TON HYD.CRANE	GROVE	69997	TRANSPORTATION	MOBILE CRANES	
3911048	T	C	WB	114	406 87 45 TON HYD.CRANE	GROVE	69899	TRANSPORTATION	MOBILE CRANES	
3911049	T	C	WB	114	406 88 15/17.5-TON HYD.CRAN	GROVE	71188	TRANSPORTATION	MOBILE CRANES	
3911050	T	C	WB	114	406 88 15/17.5-TON HYD.CRAN	GROVE	71189	TRANSPORTATION	MOBILE CRANES	
3912000	T	O	WB	100	602 DIRECT MATL COLLECTION	N/A	GEN PUR	BLDG & AREA -WB	FORKLIFTS	
3912001	T	C	WB	100	0 9 TON	BAKER	103567	BLDG & AREA -WB	FORKLIFTS	1442R
3912002	T	C	WB	100	0 GASOLINE 3 TON	BAKER	G-1835-	BLDG & AREA -WB	FORKLIFTS	01371R
3912003	T	C	WB	100	0 6000 LB	BAKER	G-1835-	BLDG & AREA -WB	FORKLIFTS	00925R
3912004	T	C	WB	100	0 6000#	BAKER	G-1835-	BLDG & AREA -WB	FORKLIFTS	01245R
3912005	T	C	WB	100	0 6000 LB	BAKER	G1835-2	BLDG & AREA -WB	FORKLIFTS	00928R
3912006	T	C	WB	100	0 3 TON L-9	BAKER	G-1835-	BLDG & AREA -WB	FORKLIFTS	00927R
3912007	T	C	WB	100	0 3 TON L 10	BAKER	G1835-2	BLDG & AREA -WB	FORKLIFTS	01546R
3912008	T	C	WB	100	602 6000 #	BAKER	G1835-2	BLDG & AREA -WB	FORKLIFTS	1500R
3912009	T	C	WB	100	0 HASOLINE GF-060-003	BAKER	C-1835-	BLDG & AREA -WB	FORKLIFTS	01372R
3912010	T	C	WB	100	0 6000 #	BAKER	G-1835-	BLDG & AREA -WB	FORKLIFTS	00955R
3912011	T	C	WB	100	0 HASOLINE 0500-060 3 TON	CLARK	H635-23	BLDG & AREA -WB	FORKLIFTS	01150R
3912012	T	C	WB	100	405 6000#	CLARK	H685-24	BLDG & AREA -WB	FORKLIFTS	
3912013	T	C	WB	100	0 6000#	PETTIBONE	71A-728	BLDG & AREA -WB	FORKLIFTS	929R
3912014	T	C	WB	100	406 20000#	PETTIBONE	71A-728	BLDG & AREA -WB	FORKLIFTS	2650R
3912015	T	C	WB	100	406 3 TON MODEL SL3	MULTI-PALLET	N/A	BLDG & AREA -WB	FORKLIFTS	2981R
3912016	T	C	WB	100	0 4000 LB SUPER 4	PETTIBONE	4-95	BLDG & AREA -WB	FORKLIFTS	00949R
3912017	T	C	WB	100	0 3 TON	PETTIBONE	7727	BLDG & AREA -WB	FORKLIFTS	01151R
3912018	T	C	WB	100	0 6000 #	PETTIBONE	7728	BLDG & AREA -WB	FORKLIFTS	01599R
3912019	T	C	WB	100	0 6000 #	PETTIBONE	7754	BLDG & AREA -WB	FORKLIFTS	01512R
3912020	T	C	WB	100	0 6000 #	PETTIBONE	7755	BLDG & AREA -WB	FORKLIFTS	01513R
3912021	T	C	WB	100	0 FORKLIFT	PETTIBONE	7756	BLDG & AREA -WB	FORKLIFTS	01514R
3912022	T	C	WB	100	0 FORKLIFT	PETTIBONE	7776	BLDG & AREA -WB	FORKLIFTS	01461R
3912023	T	C	WB	100	0 6000 #	PETTIBONE	7840	BLDG & AREA -WB	FORKLIFTS	01248R
3912024	T	C	WB	100	406 10 TON	PETTIBONE	7834	BLDG & AREA -WB	FORKLIFTS	2650R
3912025	T	C	WB	100	818 6000 #	WALDON	6386	BLDG & AREA -WB	FORKLIFTS	IIPDR
3912026	T	C	WB	100	0 DA-80	PETTIBONE MERCUR	69H-667	BLDG & AREA -WB	FORKLIFTS	01343R
3912027	T	C	WB	100	602 6000 #	PETTIBONE	69K-678	BOTH DB/WB YARD	FORKLIFTS	0843R
3912028	T	C	WB	100	0 3 TON L-35	CLARK	Y1015-1	BLDG & AREA -WB	FORKLIFTS	01344R
3912029	T	C	WB	100	0 4400#	DATSUN	FG-105-	BLDG & AREA -WB	FORKLIFTS	01153R
3912030	T	C	WB	100	0 4400 #	DATSUN	FG-105-	BLDG & AREA -WB	FORKLIFTS	01353R
3912031	T	C	WB	100	0 6000 #	DATSUN	FG-107-	BLDG & AREA -WB	FORKLIFTS	00879R
3912032	T	C	WB	100	602 6000 LB	DATSUN	FG-107-	BLDG & AREA -WB	FORKLIFTS	1034R
3912033	T	C	WB	100	0 5000 LB	DATSUN	FG-105-	BLDG & AREA -WB	FORKLIFTS	01498R
3912034	T	C	WB	100	602 2.5 TON L-42	DATSUN	FG-105-	BLDG & AREA -WB	FORKLIFTS	1154R
3912035	T	C	WB	100	0 DATSUN	DATSUN	FG105-0	BLDG & AREA -WB	FORKLIFTS	01156R
3912036	T	C	WB	100	0 2.5 TON	DATSUN	FG-105-	BLDG & AREA -WB	FORKLIFTS	01159R
3912037	T	C	WB	100	0 5000 #	DATSUN	FG-105-	BLDG & AREA -WB	FORKLIFTS	01293R
3912038	T	C	WB	100	818 FORKLIFT 6000#	WALDON	6590	BLDG & AREA -WB	FORKLIFTS	IIPDR
3912039	T	C	WB	100	0 ELECT. FORKLIFT	OTIS TIL-EF-R	30266	BLDG & AREA -WB	FORKLIFTS	01501R
3912040	T	C	WB	100	0 6000LB	DATSUN	CFG103-	BLDG & AREA -WB	FORKLIFTS	01564R
3912041	T	C	WB	100	0 3000 LB	DATSUN	CFG0036	BLDG & AREA -WB	FORKLIFTS	01597R
3912042	T	C	WB	100	0 5000 LB	DATSUN	CFG105-	BLDG & AREA -WB	FORKLIFTS	01505R
3912043	T	C	WB	100	0 FORKLIFT 3600 #	DATSUN	CFG1030	BLDG & AREA -WB	FORKLIFTS	01565R

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3912044	T	C WB	100	0	FORKLIFT 60	WHITE	3E+07	BLDG & AREA -WB	FORKLIFTS	01361R
3912045	T	C WB	100	0	6000LB	BAKER	G-1848-	BLDG & AREA -WB	FORKLIFTS	00970R
3912046	T	C WB	100	0	FORKLIFT	DATSUN	CFG0357	BLDG & AREA -WB	FORKLIFTS	01247R
3912047	T	C WB	100	309	ELECT. FORKLIFT	BIG JOE MFG	EZ0957	BLDG & AREA -WB	FORKLIFTS	3099R
3912048	T	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH DB/WB YARD	FORKLIFTS	9999R
3912049	T	C WB	0	602	OVERHAUL (SPARES)	N/A	LABOR	OUNASSINGED	FORKLIFTS	
3912050	T	C WB	100	0	7000 #	YALE	A187632	BLDG & AREA -WB	FORKLIFTS	01222R
3912051	T	C WB	100	0	CFY-60	CLARK	CFY-60-	BLDG & AREA -WB	FORKLIFTS	01246R
3912052	T	C WB	200	405	GASOLINE S40C 2 TON	HYSTER	C2D3471	BLDG & AREA -EB	FORKLIFTS	2651R
3912053	T	C WB	100	0	FORKLIFT	DATSUN	138817	BLDG & AREA -WB	FORKLIFTS	01475R
3912054	T	C WB	100	602	600 LB	CLARK	H685-24	BLDG & AREA -WB	FORKLIFTS	
3912055	T	C WB	200	409	GASOLINE 4100 #	HYSTER	B3D 555	BLDG & AREA -EB	FORKLIFTS	2650R
3912056	T	C WB	0	0	UNASSINGED	N/A	N/A	BOTH DB/WB YARD	FORKLIFTS	9999R
3912057	T	C WB	200	406	GASOLINE 4100 #	HYSTER	B3D7107	BLDG & AREA -EB	FORKLIFTS	2650R
3912058	T	C WB	100	405	3000 #	YALE	P173816	BLDG & AREA -WB	FORKLIFTS	
3912059	T	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH DB/WB YARD	FORKLIFTS	
3912060	T	C WB	100	842	ELECTRIC 3500 #	CLARK	ST40-34	BLDG & AREA -WB	FORKLIFTS	1984R
3912061	T	C WB	100	0	6000LB	CLARK	CHY60-2	BLDG & AREA -WB	FORKLIFTS	00979R
3912062	T	C WB	100	0	1500 #	STRATTON	TT11026	BLDG & AREA -WB	FORKLIFTS	01598R
3912063	T	C WB	100	0	8000 LB	CLARK	CY10089	BLDG & AREA -WB	FORKLIFTS	00931R
3912064	T	C WB	100	0	20000 LB	CLARK	HY1425-	BLDG & AREA -WB	FORKLIFTS	01511R
3912065	X	C WB	100	602	DRILL RIG MATL. ONLY	N/A	N/A	BLDG & AREA -WB	FORKLIFTS	
3912066	T	C EB	200	406	2400 LB	HYSTER	N/A	BLDG & AREA -EB	FORKLIFTS	3034R
3912067	T	C EB	200	406	GASOLINE 4000 #	DATSUM	FG105-0	BLDG & AREA -EB	FORKLIFTS	1931R
3912068	T	C WB	100	602	7500 LB	HYSTER	C5D9226	BLDG & AREA -WB	FORKLIFTS	02495R
3912069	T	C WB	100	0	3000 LB	CLARK	CHY6023	BLDG & AREA -WB	FORKLIFTS	01033R
3912070	T	C WB	100	0	ELECTRIC 2000#	CLARK	NSP30-5	BLDG & AREA -WB	FORKLIFTS	01889R
3912071	T	C WB	100	602	3 TON TYPE G	CLARK	CHY60-1	BLDG & AREA -WB	FORKLIFTS	1661R
3912072	T	C WB	0	0	RNASSIGNED	N/A	N/A	BOTH DB/WB YARD	FORKLIFTS	
3912073	T	C WB	100	0	ELECT 2 TON	RAYMOND	855-W45	BLDG & AREA -WB	FORKLIFTS	01507R
3912074	T	C WB	200	405	FORKLIFT 4000 #	HYSTER	C2D6816	BLDG & AREA -EB	FORKLIFTS	2650R
3912075	T	C WB	100	0	4000 LB	RAYMOND	855W48T	BLDG & AREA -WB	FORKLIFTS	01070R
3912076	T	C WB	100	0	7500 #	HYSTER	C5D-895	BLDG & AREA -WB	FORKLIFTS	01518R
3912077	T	C WB	100	0	ELECTRIC 4000 #	RAYMOND	855-W4S	BLDG & AREA -WB	FORKLIFTS	01508R
3912078	T	C WB	100	405	ELECT	CLARK	ST4016-	BLDG & AREA -WB	FORKLIFTS	1985R
3912079	T	C WB	200	203	ELECTRIC 2800	CLARK	ST40-35	BLDG & AREA -EB	FORKLIFTS	3034R
3912080	T	C WB	100	0	3500 LB MS	CLARK	ST40-16	BLDG & AREA -WB	FORKLIFTS	01506R
3912081	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH DB/WB YARD	FORKLIFTS	
3912082	T	C EB	200	405	ELECTRIC 3000 #	YALE	AJ12071	BLDG & AREA -EB	FORKLIFTS	2650R
3912083	T	C WB	100	0	'6 TON	HYSTER	C6D5969	BLDG & AREA -WB	FORKLIFTS	01566R
3912084	T	C EB	200	405	67 ELEC. STACKER L/T	YALE	RJ12071	BLDG & AREA -EB	FORKLIFTS	
3912085	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH DB/WB YARD	FORKLIFTS	
3912086	T	C EB	200	405	ELECTRIC 3000 #	RAYMOND	020-R30	BLDG & AREA -EB	FORKLIFTS	
3912087	T	C EB	200	629	1972 ELECT	RAYMOND	020-R30	BLDG & AREA -EB	FORKLIFTS	
3912088	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH DB/WB YARD	FORKLIFTS	
3912089	T	E EB	200	322	PALLET TRUCK	PRIME MOVER	15700	BLDG & AREA -EB	FORKLIFTS	00960R
3912090	T	C WB	100	422	4.5 TON - 1973 ELECT.	BIG JOE MFG	69830	BLDG & AREA -WB	FORKLIFTS	
3912091	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH DB/WB YARD	FORKLIFTS	
3912092	T	C WB	100	405	1972 ELECT	BLUE GIANT	32269	BLDG & AREA -WB	FORKLIFTS	3131R

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3912093	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH DB/WB YARD	FORKLIFTS	
3912094	X	C WB	100	0	1972 PROPANE	DATSUN	CFG-105	BLDG & AREA -WB	FORKLIFTS	01476R
3912095	T	C WB	128	843	1972 ELECT	RAYMOND	119-373	COMBINE SHOP	FORKLIFTS	2215R
3912096	X	C WB	100	0	UNKNOWN	PETTIBONE	71A7285	BLDG & AREA -WB	FORKLIFTS	00864R
3912097	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH DB/WB YARD	FORKLIFTS	
3912098	T	C WB	100	0	GASOLINE 5000 #	DATSUN	FG105-OB	BLDG & AREA -WB	FORKLIFTS	01515R
3912099	T	C WB	100	602	MANUEL PALLET TRUCKS	N/A	LABOR OB	BLDG & AREA -WB	FORKLIFTS	
3912100	T	C WB	100	0	1973 PROPANE	DATSUM	UNKNOWN	BLDG & AREA -WB	FORKLIFTS	01504R
3912101	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH DB/WB YARD	FORKLIFTS	
3912102	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH DB/WB YARD	FORKLIFTS	
3912103	T	C WB	100	0	6000 LB	PETTBONE	GS60-69	BLDG & AREA -WB	FORKLIFTS	00950R
3912104	T	C WB	128	843	1975 GAS 5000 LB	WALDON	9952	COMBINE SHOP	FORKLIFTS	2840R
3912105	T	C WB	100	405	ORDER PICKER 1975 ELECT	RAYMOND	012-OP2	BLDG & AREA -WB	FORKLIFTS	2842R
3912106	T	C WB	100	405	2500 LB ORD/PKR '75EL	RAYMOND	12-OP25	BLDG & AREA -WB	FORKLIFTS	3131R
3912107	T	C EB	200	601	FORKLIFT DIESEL	HYSTER	C005D16	BLDG & AREA -EB	FORKLIFTS	
3912108	T	C WB	100	406	FORKLIFT	HYSTER	COORD16	BLDG & AREA -WB	FORKLIFTS	1956R
3912109	T	C WB	100	406	4.5 TON	HYSTER	C005D16	BLDG & AREA -WB	FORKLIFTS	IIPKR
3912110	T	C WB	100	406	4.5 TON	HYSTER	C005D16	BLDG & AREA -WB	FORKLIFTS	02495R
3912111	T	C WB	100	406	4.5 TON	HYSTER	C005D16	BLDG & AREA -WB	FORKLIFTS	2651R
3912112	T	C WB	100	309	4.5 TON	HYSTER	C005D16	BLDG & AREA -WB	FORKLIFTS	3034R
3912113	T	C WB	100	409	FORKLIFT	CLARK	3562522	BLDG & AREA -WB	FORKLIFTS	2841R
3912114	T	C WB	100	405	FORKLIFT	CLARK	NS24630	BLDG & AREA -WB	FORKLIFTS	2844R
3912115	T	C WB	100	405	1976 OROPANE	HYSTER	B004D06	BLDG & AREA -WB	FORKLIFTS	
3912116	T	C EB	200	405	FORKLIFT	HYSTER	B004D06	BLDG & AREA -EB	FORKLIFTS	
3912117	T	C EB	200	417	5000 LB ELECT 1977	CLARK	E355-69	BLDG & AREA -EB	FORKLIFTS	
3912118	T	C WB	100	409	1976 PROPANE	HYSTER	C002D19	BLDG & AREA -WB	FORKLIFTS	3034R
3912119	T	C WB	100	405	FORKLIFT 1976	HYSTER	D003D05	BLDG & AREA -WB	FORKLIFTS	
3912120	T	C WB	100	338	1976 PROPANE	HYSTER	C002D19	BLDG & AREA -WB	FORKLIFTS	02385R
3912121	T	C WB	100	822	1976 PROPANE	HYSTER	C002D19	BLDG & AREA -WB	FORKLIFTS	
3912122	T	E WB	104	813	PALLET TRUCK-HYD	MULTITON	S313287	FAB SHOP	FORKLIFTS	
3912123	T	E WB	104	813	PALLET TRUCK-HYD	MULTITON	S313286	FAB SHOP	FORKLIFTS	
3912124	T	E WB	104	813	PALLET TRUCK-HYD	MULTITON	S313290	FAB SHOP	FORKLIFTS	
3912125	T	C WB	100	0	ELECT. FORKLIFT	ALLES-CHALMERS	46420	BLDG & AREA -WB	FORKLIFTS	01859R
3912126	T	C WB	100	602	BIG JOE PALLET LIFT ML	BIG JOE MFG	64209	BLDG & AREA -WB	FORKLIFTS	3034R
3912127	T	E WB	100	602	ROL-LIFT MANUAL	ROL-LIFT CORP	47014	BLDG & AREA -WB	FORKLIFTS	
3912128	T	E WB	100	602	ROL-LIFT MANUAL	ROL-LIFT CORP	A9011	BLDG & AREA -WB	FORKLIFTS	
3912129	T	E WB	100	602	HYDRAULIC PALLET TRUCK	ROL-LIFT CORP	47015	BLDG & AREA -WB	FORKLIFTS	
3912130	T	E WB	100	602	HYDRAULIC PALLET TRUCK	ROL-LIFT CORP	47016	BLDG & AREA -WB	FORKLIFTS	
3912131	T	E WB	100	602	HYDRAULIC PALLET TRUCK	ROL-LIFT CORP	47034	BLDG & AREA -WB	FORKLIFTS	
3912132	T	E WB	100	602	HYDRAULIC PALLET LIFT	ROL-LIFT CORP	47045	BLDG & AREA -WB	FORKLIFTS	
3912133	T	E WB	100	602	HAND OPER. PALLETMAN	ALLIS CHALMERS	11670	BLDG & AREA -WB	FORKLIFTS	
3912134	T	E WB	100	602	HAND OPER.	BRUNS CO.	N/A	BLDG & AREA -WB	FORKLIFTS	
3912135	T	E WB	100	602	HAND OPER.	N/A	N/A	BLDG & AREA -WB	FORKLIFTS	
3912136	T	E WB	100	602	HAND OPER.PALLETMSTR	ALLIS CHALMERS	N/A	BLDG & AREA -WB	FORKLIFTS	
3912137	T	C WB	100	405	4000 LB LP GAS	HYSTER	D003D07	BLDG & AREA -WB	FORKLIFTS	2651R
3912138	T	E WB	100	602	HAND OPER. 5000 # CAP	BURNS CO.	N/A	BLDG & AREA -WB	FORKLIFTS	
3912139	T	E WB	100	602	HAND OPER. 5000 # CAP	AMERICAN	N/A	BLDG & AREA -WB	FORKLIFTS	
3912140	T	E WB	100	602	HAND OPER. PALLETMSTR	ALLIS CHALMERS	N/A	BLDG & AREA -WB	FORKLIFTS	3308R
3912141	T	E WB	100	602	HAND OPER	STOCKA MOLLAN	8259	BLDG & AREA -WB	FORKLIFTS	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3912142	T	C	WB 100	602	HAND OPER	RAYMOND	119-373	BLDG & AREA -WB	FORKLIFTS	
3912143	T	E	WB 100	602	HAND OPER	ALLIS CHALMERS	N/A	BLDG & AREA -WB	FORKLIFTS	
3912144	T	E	WB 100	602	HAND OPER	STOCKA MOLLAN	N/A	BLDG & AREA -WB	FORKLIFTS	
3912145	T	C	WB 100	0	1500 LB ELECT 1969	CROWN	L-7645-	BLDG & AREA -WB	FORKLIFTS	01663R
3912146	T	E	WB 100	602	HAND OPER.	PRIME MOVER	18591	BLDG & AREA -WB	FORKLIFTS	
3912147	T	E	WB 100	602	HAND OPER PALLETMAN	ALLIS CHALMERS	N/A	BLDG & AREA -WB	FORKLIFTS	
3912148	T	E	WB 100	602	HAND OPER	N/A	N/A	BLDG & AREA -WB	FORKLIFTS	
3912149	T	E	WB 100	602	HAND OPER. PALLETMAN	ALLIS CHALMERS	N/A	BLDG & AREA -WB	FORKLIFTS	
3912150	T	E	WB 100	602	HAND OPER	PRIME MOVER	N/A	BLDG & AREA -WB	FORKLIFTS	
3912151	T	E	WB 100	602	MANUAL LIFT	ODENDAHL	N/A	BLDG & AREA -WB	FORKLIFTS	
3912152	T	E	WB 100	602	FORKLIFT	WESLEY MFG	402Y754	BLDG & AREA -WB	FORKLIFTS	2651R
3912153	T	E	WB 100	602	FORKLIFT	PRIME MOVER	N/A	BLDG & AREA -WB	FORKLIFTS	
3912154	T	E	WB 100	602	FORKLIFT	BARRETT ELEC.	17-2299	BLDG & AREA -WB	FORKLIFTS	
3912155	T	C	WB 100	602	FORKLIFT	BLUE GAINT	N/A	BLDG & AREA -WB	FORKLIFTS	
3912156	T	E	EB 200	602	ROL-LIFT T2748	ROL-LIFT CORP.	50328	BLDG & AREA -EB	FORKLIFTS	
3912157	T	C	WB 100	602	FORKLIFT	N/A	N/A	BLDG & AREA -WB	FORKLIFTS	
3912158	T	E	WB 100	602	HYDRAULIC PALLET 3000#	ROL-LIFT CORP.	N/A	BLDG & AREA -WB	FORKLIFTS	
3912159	T	C	WB 100	395	FORKLIFT 4000 # NP 24	CLARK	NP24615	BLDG & AREA -WB	FORKLIFTS	2843R
3912160	T	C	WB 100	422	3000 LB ELEC	BIG JOE MFG	69828	BLDG & AREA -WB	FORKLIFTS	
3912161	T	C	EB 200	405	FORKLIFT-4000 LB LP GAS	HYSTER	C002D19	BLDG & AREA -EB	FORKLIFTS	
3912162	T	C	WB 100	338	FORKLIFT-4000 LB LP GAS	HYSTER	C002D19	BLDG & AREA -WB	FORKLIFTS	
3912163	T	C	EB 200	406	FORKLIFT-8000 LB	HYSTER	C005D17	BLDG & AREA -EB	FORKLIFTS	2840R
3912164	T	C	WB 100	406	FORKLIFT-8000 LB	HYSTER	C0050-1	BLDG & AREA -WB	FORKLIFTS	3697R
3912165	T	C	WB 100	818	FORKLIFT-6000 LB ELECT.	CLARK	P465266	BLDG & AREA -WB	FORKLIFTS	
3912166	T	O	EB 200	843	ELECTRIC TOTE MOTOR	POTTER-RAYFIELD	N/A	BLDG & AREA -EB	FORKLIFTS	
3912167	T	O	WB 200	843	ELECTRIC LIFT	POTTER-RAYFIELD	N/A	BLDG & AREA -EB	FORKLIFTS	
3912168	T	O	EB 200	843	ELECTRIC TOTE MOTOR	POTTER-RAYFIELD	N/A	BLDG & AREA -EB	FORKLIFTS	
3912169	T	C	WB 100	406	4 TON	HYSTER	7382X	BLDG & AREA -WB	FORKLIFTS	2840R
3912170	T	C	WB 100	406	4 TON DIESEL	HYSTER	C005017	BLDG & AREA -WB	FORKLIFTS	2840R
3912171	T	C	WB 100	406	4 TON	HYSTER	7377X	BLDG & AREA -WB	FORKLIFTS	3034R
3912172	T	C	WB 100	461	3 TON	HYSTER	7392X	BLDG & AREA -WB	FORKLIFTS	
3912173	T	C	WB 100	407	4TON	HYSTER	7381X	BLDG & AREA -WB	FORKLIFTS	2651R
3912174	T	C	EB 200	406	4 TON	HYSTER	7378X	BLDG & AREA -EB	FORKLIFTS	
3912175	T	C	EB 200	405	6000 LB	HYSTER	X005D17	BLDG & AREA -EB	FORKLIFTS	
3912176	T	C	WB 100	406	8000 LB DIESEL	HYSTER	C005D17	BLDG & AREA -WB	FORKLIFTS	3099R
3912177	T	C	WB 100	406	8000 LB	HYSTER	C005D17	BLDG & AREA -WB	FORKLIFTS	02495R
3912178	T	C	WB 100	416	3 TON	HYSTER	C003D07	BLDG & AREA -WB	FORKLIFTS	
3912179	T	C	EB 200	405	NARROW ISLE 4000 LB	CLARK	NX246-7	BLDG & AREA -EB	FORKLIFTS	2844R
3912180	T	C	WB 100	422	2000 LB POWERWORKER	CLARK	S20-36-	BLDG & AREA -WB	FORKLIFTS	
3912181	T	C	WB 100	855	ELECT. FORKLIFT 1500 #	BIG JOE MFG	64210	BLDG & AREA -WB	FORKLIFTS	
3912182	T	C	EB 200	338	ELECT	CROWN	7645-2	BLDG & AREA -EB	FORKLIFTS	3446R
3912183	T	E	WB 100	818	PALLET TRUK-HYD	ALLIS CHALMERS	N/A	BLDG & AREA -WB	FORKLIFTS	
3912184	T	C	EB 222	834	FORKLIFT	CLARK	SP-30-3	MACH SHOP	FORKLIFTS	
3912185	T	C	WB 100	409	1977 LP GAS FORKLIFT	HYSTER	D002D04	BLDG & AREA -WB	FORKLIFTS	2844R
3912186	T	C	WB 100	338	1977 LP GAS FORKLIFT	HYSTER	D002D04	BLDG & AREA -WB	FORKLIFTS	2843R
3912187	T	C	WB 100	406	10 TON DIESEL	HYSTER	B007P09	BLDG & AREA -WB	FORKLIFTS	
3912188	T	C	WB 100	406	FORKLIFT 8000 LB 1977	HYSTER	C005D17	BLDG & AREA -WB	FORKLIFTS	2651R
3912189	T	C	WB 100	406	FORKLIFT 8000LB 1977	HYSTER	C005D17	BLDG & AREA -WB	FORKLIFTS	IIPDR
3912190	T	C	EB 200	406	12.5 TON DIESEL	HYSTER	C7P1669	BLDG & AREA -EB	FORKLIFTS	

;SET JMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3912191	T C	WB	100	406	1977 8000 LB	HYSTER	C005B17	BLDG & AREA -WB	FORKLIFTS	
3912192	T C	WB	100	0	2 TON ELE.	MOTO TRUC COTEL	30268-1	BLDG & AREA -WB	FORKLIFTS	01830R
3912193	T E	WB	100	822	PALLET TRUCK	N/A	N/A	BLDG & AREA -WB	FORKLIFTS	
3912194	T E	EB	200	322	PALLET TRUCK	PROME MOVER	10349	BLDG & AREA -EB	FORKLIFTS	
3912195	T E	WB	100	405	PALLET TRUCK	ROL-LIFT CORP	9447	BLDG & AREA -WB	FORKLIFTS	
3912196	T C	WB	100	0	PALLET TRUCK	PALLET MASTER	UNKNOWN	BLDG & AREA -WB	FORKLIFTS	01994R
3912197	T E	WB	100	405	PALLET TRUCK	ROL-LIFT CORP	47017	BLDG & AREA -WB	FORKLIFTS	
3912198	T C	WB	100	0	PALLET TRUCK	CARLSON PAINE	2369043	BLDG & AREA -WB	FORKLIFTS	01995R
3912199	T E	WB	100	405	PALLET TRUCK	N/A	N/A	BLDG & AREA -WB	FORKLIFTS	
3912200	T E	EB	200	601	PALLET TRUCK	STRATTON	10706	BLDG & AREA -EB	FORKLIFTS	
3912201	T E	WB	100	843	PALLET TRUCK	N/A	N/A	BLDG & AREA -WB	FORKLIFTS	
3912202	T E	EB	200	601	PALLET TRUCK 6000 #	WEST BEND EQ	6LP66W-1	BLDG & AREA -EB	FORKLIFTS	
3912203	T E	WB	100	843	PALLET TRUCK	BURNS CO	34847	BLDG & AREA -WB	FORKLIFTS	
3912204	T E	EB	200	457	PALLET TRUCK	N/A	N/A	BLDG & AREA -EB	FORKLIFTS	
3912205	T E	WB	100	843	PALLET TRUCK	BURNS CO	34863	BLDG & AREA -WB	FORKLIFTS	
3912206	T E	EB	200	430	PALLET TRUCK	PRIME MOVER	10058	BLDG & AREA -EB	FORKLIFTS	
3912207	T E	WB	100	405	PALLET TRUCK	PRIME MOVER	10329	BLDG & AREA -WB	FORKLIFTS	
3912208	T E	EB	200	444	PALLET TRUCK	ALLIS CHALMERS	18436	BLDG & AREA -EB	FORKLIFTS	3308R
3912209	T E	WB	100	405	PALLET TRUCK	LO-LIFT	T-17491	BLDG & AREA -WB	FORKLIFTS	
3912210	T E	EB	200	601	PALLET TRUCK	PROME MOVER	15097	BLDG & AREA -EB	FORKLIFTS	
3912211	T E	WB	100	405	PALLET TRUCK	LEWIS SHEPPARD C	2258P	BLDG & AREA -WB	FORKLIFTS	
3912212	T E	EB	200	601	PALLET TRUCK	PRIME MOVER	11023	BLDG & AREA -EB	FORKLIFTS	
3912213	T E	WB	100	405	PALLET TRUCK	HANDY HYD. TRUCK	LA13870	BLDG & AREA -WB	FORKLIFTS	
3912214	T E	EB	200	302	PALLET TRUCK 5000 #	LO-LIFT	P11331	BLDG & AREA -EB	FORKLIFTS	3705R
3912215	T E	WB	100	405	PALLET TRUCK	WELLEY MFG	402Y754	BLDG & AREA -WB	FORKLIFTS	
3912216	T E	EB	200	818	PALLET TRUCK	N/A	N/A	BLDT & AREA -EB	FORKLIFTS	
3912217	T E	WB	100	405	PALLET TRUCK	ROL-LIFT CORP	60580	BLDG & AREA -WB	FORKLIFTS	
3912218	T E	EB	200	818	PALLET TRUCK	N/A	N/A	BLDT & AREA -EB	FORKLIFTS	
3912219	T E	WB	100	831	PALLET TRUCK	N/A	2189-2	BLDG & AREA -WB	FORKLIFTS	
3912220	T E	EB	200	831	PALLET TRUCK 5000 #	BURNS CO	20651	BLDT & AREA -EB	FORKLIFTS	
3912221	T E	WB	100	409	PALLET TRUCK	ROL-LIFT CORP	60566	BLDG & AREA -WB	FORKLIFTS	
3912222	T E	EB	222	822	PALLET TRUCK	ROL-LIFT CORP	47036	MACH SHOP	FORKLIFTS	
3912223	T E	WB	100	405	PALLET TRUCK	N/A	N/A	BLDG & AREA -WB	FORKLIFTS	
3912224	T E	EB	200	843	PALLET TRUCK	N/A	N/A	BLDT & AREA -EB	FORKLIFTS	
3912225	T E	WB	100	409	PALLET TRUCK	ROL-LIFT CORP	54474	BLDG & AREA -WB	FORKLIFTS	
3912226	T E	EB	200	843	PALLET TRUCK	N/A	N/A	BLDT & AREA -EB	FORKLIFTS	
3912227	T E	WB	100	409	PALLET TRUCK	LO-LIFT	N/A	BLDG & AREA -WB	FORKLIFTS	
3912228	T E	EB	200	405	PALLET TRUCK	PRIME MOVER	16030	BLDT & AREA -EB	FORKLIFTS	
3912229	T E	WB	100	601	PALLET TRUCK	N/A	N/A	BLDG & AREA -WB	FORKLIFTS	3308R
3912230	T E	EB	200	405	PALLET TRUCK	PROME MOVER	10380	BLDT & AREA -EB	FORKLIFTS	
3912231	T E	EB	200	405	PALLET TRUCK 5000 #	ROL-LIFT CORP	47494	BLDT & AREA -EB	FORKLIFTS	
3912232	T E	EB	200	405	PALLET TRUCK	PRIME-MOVER	10331	BLDT & AREA -EB	FORKLIFTS	
3912233	T E	EB	200	405	PALLET TRUCK	ROL-LIFT CORP.	47208	BLDT & AREA -EB	FORKLIFTS	
3912234	T E	EB	200	825	PALLET TRUCK	ROL-LIFT CORP.	47013	BLDT & AREA -EB	FORKLIFTS	
3912235	T E	EB	200	825	PALLET TRUCK	ROL-LIFT CORP.	46043	BLDT & AREA -EB	FORKLIFTS	
3912236	T E	EB	200	822	PALLET TRUCK	PRIME MOVER	18863	BLDT & AREA -EB	FORKLIFTS	
3912237	T E	EB	200	834	PALLET TRUCK	N/A	N/A	BLDT & AREA -EB	FORKLIFTS	
3912238	T E	EB	200	834	PALLET TRUCK	PRIME MOVER	10043	BLDT & AREA -EB	FORKLIFTS	
3912239	T E	EB	200	601	PALLET TRUCK	N/A	N/A	BLDT & AREA -EB	FORKLIFTS	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3912240	T	E	EB 200	405	PALLET TRUCK	MULTITON	S261057	BLDT & AREA -EB	FORKLIFTS	IIPDR
3912241	T	E	EB 200	405	PALLET TRUCK 4500 #	RAMCO-STANDARD	7220	BLDT & AREA -EB	FORKLIFTS	
3912242	T	E	EB 200	831	PALLET TRUCK	PRIME MOVER	15698	BLDT & AREA -EB	FORKLIFTS	
3912243	T	C	WB 100	405	TRT LOADING FORKLIFT	CLARK	685-82-	BLDG & AREA -WB	FORKLIFTS	
3912244	T	C	WB 100	409	4000# ELECT FORKLIFT 19	CLARK	NP246-2	BLDG & AREA -WB	FORKLIFTS	2844R
3912245	T	C	WB 100	406	FORKLIFT 3500# 1978	WALDON MOD	12501	BLDG & AREA -WB	FORKLIFTS	3605R
3912246	T	C	WB 100	416	5000# LP GAS 1978	HYSTER	C002D20	BLDG & AREA -WB	FORKLIFTS	2842R
3912247	T	C	WB 100	405	4000 # LP GAS 1978	HYSTER	C002D20	BLDG & AREA -WB	FORKLIFTS	2843R
3912248	T	C	WB 100	422	4000 # LP GAS 1978	HYSTER	C002D20	BLDG & AREA -WB	FORKLIFTS	
3912249	T	C	WB 100	405	4000 # LP GAS 1978	HYSTER	C002D00	BLDG & AREA -WB	FORKLIFTS	
3912250	T	C	WB 100	406	5000 # FORKLIFT 1978	WALDON	12500	BLDG & AREA -WB	FORKLIFTS	2843R
3912251	T	C	WB 100	422	FORKLIFT-5000 LB LP-GAS	HYSTER MOD	C003D08	BLDG & AREA -WB	FORKLIFTS	
3912252	T	C	WB 100	405	FORKLIFT-5000 LB LP-GAS	HYSTER MOD	D003D08	BLDG & AREA -WB	FORKLIFTS	
3912253	T	C	WB 100	309	FORKLIFT-5000 LB LP-GAS	HYSTER MOD	D003D08	BLDG & AREA -WB	FORKLIFTS	2842R
3912254	T	C	WB 100	406	1978 8000LB	HYSTER	A018D04	BLDG & AREA -WB	FORKLIFTS	3078R
3912255	T	C	WB 127	405	ORDER PICKER 1977	RAYMOND	012-77-	MULTI-PURP WHSE	FORKLIFTS	2843R
3912256	T	E	EB 277	843	PALLET TRUCK	PRIME-MOVER	15676	#12 A WHSE	FORKLIFTS	
3912257	T	C	WB 100	405	1978 6000 LB	HYSTER	D003D08	BLDG & AREA -WB	FORKLIFTS	
3912258	T	C	WB 100	406	1978 FORKLIFT 8000	HYSTER MOD	A18D-43	BLDG & AREA -WB	FORKLIFTS	3078R
3912259	T	C	WB 100	406	1978 FORKLIFT 8000	HYSTER MOD	A180-43	BLDG & AREA -WB	FORKLIFTS	2840R
3912260	T	C	WB 100	406	1978 FORKLIFT 8000	HYSTER MOD	A018D04	BLDG & AREA -WB	FORKLIFTS	3078R
3912261	T	C	WB 100	406	1978 FORKLIFT 8000	HYSTER	A018D04	BLDG & AREA -WB	FORKLIFTS	02495R
3912262	T	C	WB 100	406	1978 FORKLIFT 8000	HYSTER	A018D04	BLDG & AREA -WB	FORKLIFTS	02495R
3912263	T	C	WB 100	406	1978 FORKLIFT 8000	HYSTER	A018D04	BLDG & AREA -WB	FORKLIFTS	3078R
3912264	T	C	EB 200	447	1978 ELECT WALKER 4000#	CLARK	S40-167	BLDT & AREA -EB	FORKLIFTS	2507R
3912265	T	C	EB 272	405	ELECTRIC RIDER 4000#	CLARK	NP246-14,4A,5&6	WHSE	FORKLIFTS	2841R
3912266	T	C	EB 272	405	ELECTRIC RIDER 4000#	CLARK	NP246-14,4A,5&6	WHSE	FORKLIFTS	
3912267	T	C	WB 100	405	1978 ELECT RIDER 4000#	CLARK	NP246-1	BLDG & AREA -WB	FORKLIFTS	3605R
3912268	T	C	EB 200	395	1978 FORKLIFT NAR-AISLE	CLARK	NP246-1	BLDG & AREA -WB	FORKLIFTS	3078R
3912269	T	C	WB 100	406	1978FORKLIFT 5000#	WALDON MOD	12828	BLDG & AREA -WB	FORKLIFTS	3675R
3912270	T	C	WB 100	422	4000# NARROW AISLE 1978	CLARK	NP246-1	BLDG & AREA -WB	FORKLIFTS	
3912271	T	C	WB 100	405	1970 ORDER PICKER 3000#	HYSTER	A118U41	BLDG & AREA -WB	FORKLIFTS	
3912272	T	C	WB 100	405	1970 ORDER PICKER 3000#	HYSTER	A118U41	BLDG & AREA -WB	FORKLIFTS	3605R
3912273	T	E	WB 152	613	ALLET TRUCK HYD	BARRETT ELEC.	1723602	LAUNCH AR PON.	FORKLIFTS	
3912274	T	C	WB 113	627	ROL-A-LIFT MANUAL	SKARNES INC	3598-6	LBTF	FORKLIFTS	
3912275	T	C	WB 113	627	ROL-A-LIFT MANUAL	SKARNES INC	3597-6	LBTF	FORKLIFTS	
3912276	T	C	WB 113	627	ROL-A-LIFT MANUAL	SKARNES INC	3599-6	LBTF	FORKLIFTS	
3912277	T	C	WB 113	627	ROL-A-LIFT MANUAL	SKARNES INC	3596-6	LBTF	FORKLIFTS	
3912278	T	C	WB 100	602	FORKLIFT	DATSUN	FG10500	BLDG & AREA -WB	FORKLIFTS	2842R
3912279	T	C	WB 127	405	FORKLIFT TRILOADER ELEC	CLARK	E685-65	MULTI-PURP WHSE	FORKLIFTS	3605R
3912280	T	O	WB 133	602	PALLET JACK	N/A	N/A	WET DK BLDG	FORKLIFTS	3659R
3912281	T	O	WB 133	602	ALLET JACK	N/A	N/A	WET DK BLDG	FORKLIFTS	3659R
3912282	T	C	EB 269	405	FORKLIFT 4T (FRIG)	DATSUN	CFG 103#1	WHSE	FORKLIFTS	
3912283	T	C	EB 269	405	FORKLIFT 4T (FRIG)	DATSUN	CFG 103#1	WHSE	FORKLIFTS	
3912284	T	C	EB 269	405	FORKLIFT 4T (FRIG)	DATSUN	CFG 103#1	WHSE	FORKLIFTS	3660R
3912285	T	C	EB 200	602	FORKLIFT 2 TON FRIG	CLARK	C40B-18	BLDG & AREA -EB	FORKLIFTS	3660R
3912286	T	C	EB 200	602	FORKLIFT 2.5 TON FRIG	DATSUN	CFD-105	BLDG & AREA -EB	FORKLIFTS	3660R
3912287	T	C	EB 200	602	FORKLIFT 2 TON FRIG	TOWNOTER	N/A	BLDG & AREA -EB	FORKLIFTS	3660R
3912288	T	C	WB 127	338	FORKLIFT 4800 # LP GAS	HYSTER	C002D22	MULTI-PURP WHSE	FORKLIFTS	

SSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3912289	T	C	WB	114 406	82 11450 # DIESEL L/T	HYSTER	C5D-223	TRANSPORTATION	FORKLIFTS	3771R
3912290	T	C	WB	114 406	82 11450 # DIESEL L/T	HYSTER	C5D-223	TRANSPORTATION	FORKLIFTS	
3912291	T	C	WB	114 406	82 11450 # DIESEL L/T	HYSTER	C5D-223	TRANSPORTATION	FORKLIFTS	
3912292	T	C	WB	114 406	82 11450 # DIESEL L/T	HYSTER	C5D-223	TRANSPORTATION	FORKLIFTS	
3912293	T	C	WB	114 406	82 11450 # DIESEL L/T	HYSTER	C5D-223	TRANSPORTATION	FORKLIFTS	
3912294	T	C	WB	114 406	82 11450 # DIESEL L/T	HYSTER	C5D-223	TRANSPORTATION	FORKLIFTS	
3912295	T	C	WB	114 406	82 11450 # DIESEL L/T	HYSTER	A18D-51	TRANSPORTATION	FORKLIFTS	9999
3912296	T	C	WB	114 406	82 11450 # DIESEL L/T	HYSTER	A18D-51	TRANSPORTATION	FORKLIFTS	3605R
3912297	T	C	WB	114 406	82 11450 # DIESEL L/T	HYSTER	A18D518	TRANSPORTATION	FORKLIFTS	3605R
3912298	T	C	WB	114 406	82 11450 # DIESEL L/T	HYSTER	A18D-51	TRANSPORTATION	FORKLIFTS	3605R
3912299	T	C	WB	130 409	82 4000# LPG L/T	HYSTER	D2D1052	ALUM FAB SHOP	FORKLIFTS	
3912300	T	C	WB	130 405	82 4000# LPG L/T	HYSTER	D2D1052	ALUM FAB SHOP	FORKLIFTS	
3912301	T	C	EB	269 405	82 4000# LPG L/T	HYSTER	D002D10	#1 WHSE	FORKLIFTS	
3912302	T	C	WB	142 409	82 4000# LPG L/T	HYSTER	D002D10	MULT-PURP STOR	FORKLIFTS	
3912303	T	C	WB	142 405	82 4000# LPG L/T	HYSTER	D002D10	MULT-PURP STOR	FORKLIFTS	
3912304	T	C	WB	114 406	82 30000 # DIESEL L/T	HYSTER	B19P-18	TRANSPORTATION	FORKLIFTS	
3912305	T	C	WB	114 406	81 15000 # DIESEL L/T	CATERPILLAR	70Y487	TRANSPORTATION	FORKLIFTS	
3912306	T	C	WB	114 406	82 30000 # DIESEL L/T	HYSTER	B19P-19	TRANSPORTATION	FORKLIFTS	
3912307	T	C	WB	114 406	82 11450 # DIESEL L/T	HYSTER	C005D23	TRANSPORTATION	FORKLIFTS	
3912308	T	C	WB	114 406	82 11450 # DIESEL L/T	HYSTER	C005D23	TRANSPORTATION	FORKLIFTS	
3912309	T	C	WB	114 406	82 11450 # DIESEL L/T	HYSTER	C005D23	TRANSPORTATION	FORKLIFTS	
3912310	T	C	WB	128 406	82 11450 # DIESEL L/T	HYSTER	C005D23	COMBINE SHOP	FORKLIFTS	
3912311	T	C	WB	114 406	8000 # DIESEL L/T	HYSTER	C5D-234	TRANSPORTATION	FORKLIFTS	
3912312	T	C	WB	114 406	8000 # DIESEL L/T	HYSTER	C5D-234	TRANSPORTATION	FORKLIFTS	
3912313	T	C	WB	114 406	8000 # DIESEL L/T	HYSTER	C5D-234	TRANSPORTATION	FORKLIFTS	
3912314	T	C	WB	114 406	8000 # DIESEL L/T	HYSTER	C5D-234	TRANSPORTATION	FORKLIFTS	
3912315	T	C	WB	128 405	8000 # DIESEL L/T	HYSTER	C5D-234	COMBINE SHOP	FORKLIFTS	
3912316	T	C	WB	114 406	83 8000 # DIESEL L/T	HYSTER	A18D-53	TRANSPORTATION	FORKLIFTS	
3912317	T	C	WB	128 409	83 4000# LPG L/T	HYSTER	D002D11	COMBINE SHOP	FORKLIFTS	
3912318	T	C	WB	127 417	83 5000 #LPG L/T	HYSTER	D002D09	MULTI-PURP WHSE	FORKLIFTS	
3912319	T	C	WB	127 405	83 5000 # LPG L/T	HYSTER	D002D01	MULTI-PURP WHSE	FORKLIFTS	
3912320	T	C	WB	192 825	83 4000 # LPG L/T	HYSTER	D002D11	SHEEMTLPCOMB SH	FORKLIFTS	
3912321	T	C	WB	192 409	83 5000# LPG L/T	HYSTER	D002D09	SHEEMTLPCOMB SH	FORKLIFTS	
3912322	T	C	WB	128 409	83 5000 # LPG L/T	HYSTER	F3D-210	COMBINE SHOP	FORKLIFTS	
3912323	T	C	WB	193 855	83 DIESEL L/T 3000 #	HYSTER	BID1368	ELECT-COMB SHOP	FORKLIFTS	
3912324	T	C	WB	273 422	83 6000# LPG L/T	HYSTER	F003D02	#10 WHSE	FORKLIFTS	
3912325	T	C	WB	193 422	83 6000 # LPG L/T	HYSTER	F3D-239	ELECT-COMB SHOP	FORKLIFTS	
3912326	T	C	WB	113 417	6000 #LPG L/T	HYSTER	F3D-238	LBTF	FORKLIFTS	
3912327	T	C	WB	113 338	5000# LPG L/T	HYSTER	F3D-210	LBTF	FORKLIFTS	
3912328	T	C	EB	230 406	83 4000 # DIESEL L/T	WALDON	16213	TRANS OFF	FORKLIFTS	3605R
3912329	T	C	EB	230 406	83 4000 # DIESEL L/T	WALDON	16212	TRANS OFF	FORKLIFTS	3605R
3912330	T	C	EB	230 406	83 4000 # DIESEL L/T	WALDON	16211	TRANS OFF	FORKLIFTS	
3912331	T	C	WB	128 405	83 3750 # ELECT L/T	CLARK	NP246-0	COMBINE SHOP	FORKLIFTS	
3912332	T	C	WB	128 405	83 3750 # ELECT L/T	CLARK	NP246-0	COMBINE SHOP	FORKLIFTS	
3912333	T	C	EB	269 405	83 3750 # ELECT L/T	CLARK	NP246-0	#1 WHSE	FORKLIFTS	
3912334	T	C	WB	128 409	83 3750 # ELECT L/T	CLARK	NP246-0	COMBINE SHOP	FORKLIFTS	
3912335	T	C	WB	128 405	83 2500 # D.C. L/T	CLARK	0081-53	COMBINE SHOP	FORKLIFTS	
3912336	T	C	WB	128 405	83 2500 # D.C. L/T	CLARK	0080-53	COMBINE SHOP	FORKLIFTS	
3912337	T	C	EB	200 406	FORKLIFT	CATERPILLAR	41X0158	BLDG & AREA -EB	FORKLIFTS	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3912338	T C	EB	200	405	FORKLIFT	CATERPILLAR	35Y0042	BLDG & AREA -EB	FORKLIFTS	
3912339	T C	EB	200	405	FORKLIFT	CATERPILLAR	11Y524	BLDG & AREA -EB	FORKLIFTS	
3912340	T C	EB	200	405	FORKLIFT	CATERPILLAR	10Y1103	BLDG & AREA -EB	FORKLIFTS	
3912341	T C	EB	200	890	8000# DIESEL L/T	HYSTER	C005B17	BLDG & AREA -EB	FORKLIFTS	
3912342	T C	EB	200	890	FORKLIFT	CATERPILLAR	41X0186	BLDG & AREA -EB	FORKLIFTS	3605R
3912346	T C	EB	200	890	77 8000 # L/T	HYSTER	C005D17	BLDG & AREA -EB	FORKLIFTS	
3912347	T C	EB	200	406	FORKLIFT	CATERPILLAR	72Y0029	BLDG & AREA -EB	FORKLIFTS	
3912348	T C	EB	200	406	FORKLIFT	HYSTER	B19P-19	BLDG & AREA -EB	FORKLIFTS	
3912349	T C	EB	200	406	FORKLIFT	CATERPILLAR	41C0122	BLDG & AREA -EB	FORKLIFTS	
3912350	T C	EB	200	890	FORKLIFT	CATERPILLAR	41X0185	BLDG & AREA -EB	FORKLIFTS	3561R
3912356	T C	EB	272	827	PALLET JACK-5000#	STOCKA	11053	4,4A, 5&6 WHSE	FORKLIFTS	
3912357	T C	EB	277	818	PALLET JACK	WESLEY MFG	11D17Y8#12	A WHSE	FORKLIFTS	
3912358	T C	EB	272	827	83 3000 # ELECT L/T	CLARK	00134934	4,4A, 5&6 WHSE	FORKLIFTS	
3912360	T C	WB	192	825	6000 # LIFT TRUCK CRANE	WALLACE	3445-00	SHEEMTL-COMB SH	FORKLIFTS	
3912361	T C	WB	114	406	85 8000 # EIESEL L/T	HYSTER	A18D-55	TRANSPORTATION	FORKLIFTS	
3912362	T C	WB	114	406	85 8000 # EIESEL L/T	HYSTER	A18D-55	TRANSPORTATION	FORKLIFTS	
3912363	T C	WB	114	406	85 8000 # EIESEL L/T	HYSTER	A18D-55	TRANSPORTATION	FORKLIFTS	
3912364	T C	WB	114	406	85 8000 # EIESEL L/T	HYSTER	A18D-55	TRANSPORTATION	FORKLIFTS	
3912365	T C	WB	114	406	85 11450 # DIESEL L/T	HYSTER	C005D24	TRANSPORTATION	FORKLIFTS	
3912366	T C	WB	127	406	85 8150 # LPG L/T	HYSTER	C005D24	MULTI-PURP WHSE	FORKLIFTS	
3912367	T C	WB	114	405	85 11450 # DIESEL L/T	HYSTER	D002D12	TRANSPORTATION	FORKLIFTS	
3912368	T C	WB	114	406	85 8000 # DIESEL L/T	HYSTER	A18D553	TRANSPORTATION	FORKLIFTS	
3912369	T C	WB	114	406	85 8000 # DIESEL L/T	HYSTER	A18D553	TRANSPORTATION	FORKLIFTS	
3912370	T C	WB	114	406	85 4-TON DIESEL L/T	HYSTER	C005D24	TRANSPORTATION	FORKLIFTS	
3912371	T C	WB	114	406	85 4 TON DIESEL L/T	HYSTER	C005D24	TRANSPORTATION	FORKLIFTS	
3912372	T C	EB	211	303	4000 # LPG L/T	DATSUN	CFG1030	WALKER YD	FORKLIFTS	
3912373	T C	EB	211	303	4000 # LPG L/T	DATSUN	CFG1050	WALKER YD	FORKLIFTS	
3912374	T C	WB	127	405	85 4000 # SWING MAST L/	DREXEL	16002	MULTI-PURP WHSE	FORKLIFTS	
3912375	T C	WB	3	817	86 4000 # ELECT WALKER	CLARK	ST245-0	TRACK 1 NORTH	FORKLIFTS	
3912376	T C	WB	127	405	86 4000 # LPG L/T	HYSTER	D002D13	MULTI-PURP WHSE	FORKLIFTS	
3912377	T C	WB	162	422	86 4000 # LPG L/T	HYSTER	D002D13	MOD-ASSY BAY4	FORKLIFTS	
3912378	T C	WB	127	338	86 4000 # LPG L/T	HYSTER	D002D13	MULTI-PURP WHSE	FORKLIFTS	
3912379	T C	WB	127	338	86 4000 # LPG L/T	HYSTER	D002D13	MULTI-PURP WHSE	FORKLIFTS	
3912380	T C	WB	100	806	86 4000 # ELECT WALKER	CLARK	S5245-0	BLDG & AREA -WB	FORKLIFTS	
3912381	T C	WB	127	405	86 4000 # SWING MAST L/	DREXEL	15018-1	MULTI-PURP WHSE	FORKLIFTS	
3912382	T C	WB	127	405	86 4000 # SWING MAST L/	DREXEL	15018-1	MULTI-PURP WHSE	FORKLIFTS	
3912383	T C	WB	114	406	86 17 TON DIESEL L/T	HYSTER	B018D01	TRANSPORTATION	FORKLIFTS	
3912384	T C	WB	162	806	86 4000 # ELECT WALKER	CLARK	ST245-0	MOD-ASSY BAY4	FORKLIFTS	
3912385	T C	EB	200	809	5500 # HAND PALLET TRUC	ATLAS	P-0275	BLDG & AREA -EB	FORKLIFTS	
3912386	T C	EB	200	809	5500 # HAND PALLET TRUC	ATLAS	20278	BLDG & AREA -EB	FORKLIFTS	
3912387	T C	WB	129	422	86 2500 # ELECT FORTLIF	HYSTER	A174D-0	MN WHSE	FORKLIFTS	
3912388	T C	EB	200	822	86 5000 # LPG L/T	HYSTER	F003A05	BLDG & AREA -EB	FORKLIFTS	
3912389	T C	WB	133	835	86 4000 # ELECT FORTLIF	CLARK	ST245-0	WET DK BLDG	FORKLIFTS	
3912390	T C	EB	230	406	87 8000 # DIESEL L/T	HYSTER	F005A02	TRANS OFF	FORKLIFTS	
3912391	T C	EB	230	406	87 8000 # DIESEL L/T	HYSTER	F005A02	TRANS OFF	FORKLIFTS	
3912392	T C	WB	191	831	87 4000# SWING MAST L/T	DRCXEL	15018-1	PIPE-COMB SHOP	FORKLIFTS	
3912393	T C	WB	114	406	87 6000 # DIESET L/T	HYSTER	Z126J15	TRANSPORTATION	FORKLIFTS	
3912394	T C	WB	114	406	87 6000 # DIESET L/T	HYSTER	Z126J15	TRANSPORTATION	FORKLIFTS	
3912395	T C	EB	230	406	87 8000 # DIESEL L/T	CATERPILLAR	37W0566	TRANS OFF	FORKLIFTS	

SSET UMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3912396	T	C	WB 114	406	87 8000 # DIESEL L/T	HYSTER	A018D05	TRANSPORTATION	FORKLIFTS	
3912397	T	C	WB 114	406	87 8000 # DIESEL L/T	HYSTER	A018D05	TRANSPORTATION	FORKLIFTS	
3912398	T	C	WB 114	406	87 8000 # DIESEL L/T	HYSTER	A018D05	TRANSPORTATION	FORKLIFTS	
3912399	T	C	EB 230	406	87 8000 # DIESEL L/T	HYSTER	A018D05	TRANS OFF	FORKLIFTS	
3912400	T	C	WB 129	405	87 4000 # SWING MAST L/	DREXEL	15018-1	MN WHSE	FORKLIFTS	
3912401	T	C	WB 127	338	87 3000 # ELECT L/T	HYSTER	B118D01	MULTI-PURP WHSE	FORKLIFTS	
3912402	T	C	WB 127	338	87 3000 # ELECT L/T	HYSTER	B118D01	MULTI-PURP WHSE	FORKLIFTS	
3912403	T	C	EB 222	826	87 1000 # ELECT WALKER	CLARK	S-30-03	MACH SHOP	FORKLIFTS	
3912404	T	C	WB 129	405	87 3000 # ELECT L/T	HYSTER	B118D01	MN WHSE	FORKLIFTS	
3912405	T	C	WB 20	822	89 1000# ELECT WALKER	CLARK	0389	MACH.PKG. AREA	FORKLIFTS	
3912406	T	C	WB 100	406	89 8000 # DIESEL L/T	HYSTER	F005A07	BLDG & AREA -WB	FORKLIFTS	
3912407	T	C	WB 100	406	89 4 TON DIESEL F/L	HYSTER	F005A07	BLDG & AREA -WB	FORKLIFTS	
3912408	T	C	WB 100	406	89 4 TON DIESEL F/L	HYSTER	F005A07	BLDG & AREA -WB	FORKLIFTS	
3913001	T	C	WB 100	406	70 TON TRACTOR	FAUN	168-191	BLDG & AREA -WB	FAUN TRACTORS	3207R
3913002	T	C	WB 100	406	70 TON TRACTOR	FAUN	168-192	BLDG & AREA -WB	FAUN TRACTORS	2617R
3913003	T	C	WB 100	406	100 TON TRACTOR	FAUN	168-193	BLDG & AREA -WB	FAUN TRACTORS	3207R
3913004	T	C	WB 100	406	100 TON TRACTOR	FAUN	168-194	BLDG & AREA -WB	FAUN TRACTORS	2617R
3913005	T	C	WB 100	406	350 TON TRACTOR	FAUN	168-195	BLDG & AREA -WB	FAUN TRACTORS	2514R
3913006	T	C	WB 100	406	100 TON TRACTOR	OTTAWA COMMANDO	53600	BLDG & AREA -WB	FAUN TRACTORS	
3913007	T	C	WB 100	406	100 TON TRACTOR	CAPACITY MOD	3028	BLDG & AREA -WB	FAUN TRACTORS	
3913008	T	C	WB 100	406	100 TON TRACTOR	CAPACITY MOD	3027	BLDG & AREA -WB	FAUN TRACTORS	
3914000	T	C	WB 100	602	DIRECT MTL COLLECTION #	N/A	GEN PUR	BLDG & AREA -WB	FARM TRACTORS	
3914001	T	C	WB 100	602	SUPER 2000	FORD	068-162	BLDG & AREA -WB	FARM TRACTORS	
3914002	T	C	WB 100	602	SUPER 2000	FORD	068-161	BLDG & AREA -WB	FARM TRACTORS	
3914003	X	C	WB 100	0	SUPER 2000	FORD	068-163	BLDG & AREA -WB	FARM TRACTORS	01253R
3914004	T	C	WB 100	0	SUPER 2000	FORD	068-164	BLDG & AREA -WB	FARM TRACTORS	01059R
3914005	T	C	WB 100	602	SUPER 2000	FORD	068-165	BLDG & AREA -WB	FARM TRACTORS	
3914006	X	C	WB 100	0	SUPER 2000	FORD	068-166	BLDG & AREA -WB	FARM TRACTORS	01059R
3914007	X	C	WB 100	0	SUPER 2000	FORD	068-167	BLDG & AREA -WB	FARM TRACTORS	01883R
3914008	T	C	WB 100	602	SUPER 2000	FORD	068-168	BLDG & AREA -WB	FARM TRACTORS	
3914009	T	C	WB 100	0	SUPER 2000	FORD	068-169	BLDG & AREA -WB	FARM TRACTORS	01041R
3914010	T	C	WB 100	602	SUPER 2000	FORD	068-170	BLDG & AREA -WB	FARM TRACTORS	3049R
3914011	X	C	WB 100	0	SUPER 4000	FORD	068-171	BLDG & AREA -WB	FARM TRACTORS	01042R
3914012	T	C	WB 100	602	SUPER 4000	FORD	068-172	BLDG & AREA -WB	FARM TRACTORS	IIPDR
3914013	X	C	WB 100	0	SUPER 4000	FORD	068-173	BLDG & AREA -WB	FARM TRACTORS	01040R
3914014	X	C	WB 100	0	SUPER 4000	FORD	068-174	BLDG & AREA -WB	FARM TRACTORS	01039R
3914015	T	C	EB 200	406	SUPER 5000	FORD	C330869	BLDG & AREA -EB	FARM TRACTORS	
3914016	X	C	WB 100	0	BACK HOE	MASSEY FERGUSON	1196002	BLDG & AREA -WB	FARM TRACTORS	01263R
3914017	X	C	WB 100	0	FRONT END LOADER	BOBCAT	68259	BLDG & AREA -WB	FARM TRACTORS	01388R
3914018	X	C	WB 100	0	SUPER 2000	FORD	BJ42C05	BLDG & AREA -WB	FARM TRACTORS	01299R
3914019	T	C	WB 100	331	FRONT END LOADER	MICHIGAN/CLARK	447A-16	BLDG & AREA -WB	FARM TRACTORS	2646R
3914020	T	C	WB 131	602	LAWN/GARDEN TRACTOR	WHEELHORSE	995342	PLANT ENGR BLDG	FARM TRACTORS	
3914021	T	C	WB 100	406	TRACTOR	CLARK	9B58285	BLDG & AREA -WB	FARM TRACTORS	
3914022	T	C	WB 100	406	TRACTOR	FORD	9B64493	BLDG & AREA -WB	FARM TRACTORS	
3914023	T	C	EB 200	602	BACK HOE & END LOADER	MASSEY FERGUSON	1649110	BLDG & AREA -EB	FARM TRACTORS	
3914024	T	C	WB 100	0	FRONT END LOADER BBCAT	FORD	499-M-1	BLDG & AREA -WB	FARM TRACTORS	01560R
3914025	T	C	WB 100	602	FRONT END LOADER	FORD	C584124	BLDG & AREA -WB	FARM TRACTORS	
3914026	T	C	WB 100	406	82 TRACTOR W/CAB	WHEELHORSE	9A34403	BLDG & AREA -WB	FARM TRACTORS	
3914027	T	C	EB 218	602	82 BACK HOE/END LOADER	MASSEY FERGUSON	0653285	MAINT, GARAGE	FARM TRACTORS	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3914028	T	C	EB 200	890	FARM TRACTOR	BUSH HOG	068-172	BLDG & AREA -EB	FARM TRACTORS	
3914029	T	C	WB 131	602	84 LAWN/GARDER TRACTOR	FORD	A116B80	PLANT ENGR BLDG	FARM TRACTORS	
3914030	T	C	WB 114	406	85 FARM TRACTOR W/CAB	FORD	K129057	TRANSPORTATION	FARM TRACTORS	
3914031	T	C	WB 131	602	GRASS/ WEED CUTTER	N/A	D549964	PLANT ENGR BLDG	FARM TRACTORS	
3914032	T	C	WB 100	406	88 FARM TRACTOR W/CAB	KAMAG	BB62599	BLDG & AREA -WB	FARM TRACTORS	
3914033	T	C	EB 200	406	88 FARM TRACTOR W/CAB	KAMAG	BB62598	BLDG & AREA -EB	FARM TRACTORS	
3915000	T	O	WB 100	602	DIRECT MATL. COLLECTION	KAMAG	N/A	BLDG & AREA -WB	TRAILERS	
3915001	X	C	WB 100	0	TRAILER-REBUILT 10 TON	KAMAG	12510	BLDG & AREA -WB	TRAILERS	1231RR
3915002	T	C	WB 100	406	30 FT, 10 TON F/B WAGON	KAMAG	12511	BLDG & AREA -WB	TRAILERS	
3915003	X	C	WB 100	0	10 TON TYPE 1	KAMAG	12514	BLDG & AREA -WB	TRAILERS	0973RR
3915004	X	C	WB 100	0	10 TON TYPE 1	KAMAG	12515	BLDG & AREA -WB	TRAILERS	0972RR
3915005	T	C	WB 100	406	10 TON	KAMAG	12513	BLDG & AREA -WB	TRAILERS	
3915006	T	C	WB 100	406	30 FT, 10 TON F/B WAGON	KAMAG	12512	BLDG & AREA -WB	TRAILERS	
3915007	T	C	WB 100	406	10 TON TYPE 1	KAMAG	12517	BLDG & AREA -WB	TRAILERS	
3915008	T	C	WB 100	406	30 FT, 10 TON F/B WAGON	KAMAG	12516	BLDG & AREA -WB	TRAILERS	
3915009	T	C	WB 100	406	10 TON	KAMAG	12519	BLDG & AREA -WB	TRAILERS	
3915010	X	C	WB 100	0	10 TON TYPE1	KAMAG	12518	BLDG & AREA -WB	TRAILERS	1494RR
3915011	T	C	WB 100	406	30 TON TYPE 1	KAMAG	12522	BLDG & AREA -WB	TRAILERS	
3915012	T	C	WB 100	406	30 FT, 30 TON F/B WAGON	KAMAG	12523/2	BLDG & AREA -WB	TRAILERS	
3915013	T	C	WB 100	406	30 TON TYPE 1	KAMAG	12520	BLDG & AREA -WB	TRAILERS	02203R
3915014	T	C	WB 100	406	30 TON TYPE 1	KAMAG	12521	BLDG & AREA -WB	TRAILERS	02249R
3915015	T	C	WB 100	0	70 TON TYPE 1	KAMAG	12524	BLDG & AREA -WB	TRAILERS	1413RR
3915016	X	C	WB 100	0	70 TON TYPE 1	KAMAG	12525	BLDG & AREA -WB	TRAILERS	0943RR
3915017	T	C	WB 100	0	70 TON	KAMAG	12526	BLDG & AREA -WB	TRAILERS	0944RR
3915018	T	C	WB 100	406	100 TON TYPE 1	KAMAG	5545	BLDG & AREA -WB	TRAILERS	3645R
3915019	T	C	WB 100	406	100 TON	KAMAG	5546	BLDG & AREA -WB	TRAILERS	3645R
3915020	X	C	WB 100	0	100 TON TYPE 1	KAMAG	5547	BLDG & AREA -WB	TRAILERS	0974R
3915021	T	C	WB 134	134	8 X 5 FT,2.5 TON WAGON	BIRMINGHAM TANK	1734	TRAIN. BLDG	TRAILERS	1235R
3915022	T	C	WB 100	406	2.5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	
3915023	T	C	WB 100	406	WORK WAGON	WELLS CARGO	WC281S	BLDG & AREA -WB	TRAILERS	02214
3915024	T	C	WB 100	406	18 FT, 2.5 TON F/B WAGO	UTILITY	H25439	BLDG & AREA -WB	TRAILERS	3168R
3915025	T	C	EB 200	406	18 FT, 2.5 TON F/B WAGO	UTILITY	H25450	BLDG & AREA -EB	TRAILERS	
3915026	X	C	WB 100	0	2.5 TON	BIRMINGHAM TANK	1244	BLDG & AREA -WB	TRAILERS	1197R
3915027	X	C	WB 100	0	2.5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	1301RR
3915028	X	C	WB 100	0	2.5 TON	BIRMINGHAM TANK	S251621	BLDG & AREA -WB	TRAILERS	1302RR
3915029	T	C	WB 100	406	2.5 TON	BIRMINGHAM TANK	1740	BLDG & AREA -WB	TRAILERS	02454
3915030	X	C	WB 100	0	PASSENGER-WOOD 5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	1329RR
3915031	X	C	WB 100	0	PASSENGER-WOOD 5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	1329RR
3915032	T	C	EB 200	406	26 FT, 5 TON F/B WAGON	ALABAMA	G65707	BLDG & AREA -EB	TRAILERS	
3915033	T	C	EB 200	406	20 FT, 5 TON F/B WAGON	ALABAMA	G65706	BLDG & AREA -EB	TRAILERS	
3915034	T	C	EB 200	406	20 FT, 5 TON F/B WAGON	ALABAMA	G65708	BLDG & AREA -EB	TRAILERS	
3915035	T	C	WB 100	406	100 TON LOWBOY	BIRMINGHAM TANK	16100FL	BLDG & AREA -WB	TRAILERS	3571R
3915036	T	C	EB 200	406	30 TON LOWBOY WAGON	BIRMINGHAM TANK	T-52929	BLDG & AREA -EB	TRAILERS	
3915037	T	C	EB 200	406	23 FT, 13 TON LOWBOY	BIRMINGHAM TANK	T-1148	BLDG & AREA -EB	TRAILERS	
3915038	T	C	WB 100	406	45 FT, HWY FLATBED	BROWN	M689450	BLDG & AREA -WB	TRAILERS	
3915039	T	C	WB 100	406	TRAILER-2 TON RED	BROWN	M691106	BLDG & AREA -WB	TRAILERS	
3915040	T	C	WB 100	406	2.5 TON RED	BROWN	04-1568	BLDG & AREA -WB	TRAILERS	02260R
3915041	T	C	WB 100	406	45 FT, HWY FLATBED	FRUEHAUF	FW12002	BLDG & AREA -WB	TRAILERS	
3915042	T	C	EB 200	422	45 FT, HWY FLATBED	HREAT DANE	15-3094	BLDG & AREA -EB	TRAILERS	

ISET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3915043	T	C	WB	137	422 40 FT, VAN	DORSEY	63195	BOILER ERECT	TRAILERS	
3915044	X	C	WB	100	0 5 TON	BIRMINGHAM TANK	1741	BLDG & AREA -WB	TRAILERS	1988RR
3915045	T	C	WB	100	0 5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	1197RR
3915046	X	C	WB	100	0 2.5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	1234RR
3915047	X	C	WB	100	0 2.5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	1235RR
3915048	T	C	EB	200	406 5 TON	ALABAMA	G65504	BLDG & AREA -EB	TRAILERS	
3915049	T	C	WB	100	406 5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	
3915050	T	C	EB	200	406 18 FT, 5 TON F/B WAGON	UTILITY TRLR	WKSD25623	BLDG & AREA -EB	TRAILERS	
3915051	X	C	WB	100	0 5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	1194RR
3915052	X	C	WB	100	0 5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	1195RR
3915053	X	C	WB	100	0 5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	1196RR
3915054	T	C	EB	200	406 18 FT, 5 TON F/B WAGON	UTILITY TRLR	WKSH25444	BLDG & AREA -EB	TRAILERS	
3915055	T	C	EB	200	406 18 FT, 5 TON F/B WAGON	UTILITY TRLR	WKSH25443	BLDG & AREA -EB	TRAILERS	
3915056	T	C	EB	200	406 18 FT, 5 TON F/B WAGON	UTILITY TRLR	WKSH25448	BLDG & AREA -EB	TRAILERS	
3915057	T	C	EB	200	406 18 FT, 5 TON F/B WAGON	UTILITY TRLR	WKSH25449	BLDG & AREA -EB	TRAILERS	
3915058	T	C	WB	100	406 18 FT, 5 TON F/B WAGON	UTILITY TRLR	WKSH25445	BLDG & AREA -WB	TRAILERS	
3915059	X	C	WB	100	0 5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	1233RR
3915060	T	C	WB	100	406 5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	
3915061	T	C	EB	200	406 18 FT, 5 TON F/B WAGON	UTILITY TRLR	WKSH25437	BLDG & AREA -EB	TRAILERS	
3915062	T	C	EB	200	406 18 FT, 5 TON F/B WAGON	UTILITY TRLR	WKSH25447	BLDG & AREA -EB	TRAILERS	
3915063	T	C	WB	100	406 5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	
3915064	X	C	WB	100	0 2.5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -WB	TRAILERS	1236RR
3915065	T	C	WB	100	406 STRIPPED	BIRMINGHAM TANK	1743	BLDG & AREA -WB	TRAILERS	
3915066	T	C	EB	200	406 20FT, 5 TON F/B WAGON	ALABAMA	G65696	BLDG & AREA -EB	TRAILERS	
3915067	T	C	EB	200	406 5 TON	ALABAMA	G65694	BLDG & AREA -EB	TRAILERS	
3915068	T	C	EB	200	406 40 FT, 5 TON F/B WAGON	ALABAMA	G65695	BLDG & AREA -EB	TRAILERS	
3915069	T	C	EB	200	851 20 FT, 5 TON F/B WAGON	ALABAMA	G65698	BLDG & AREA -EB	TRAILERS	
3915070	T	C	EB	200	851 30 FT, 5 TON F/B WAGON	ALABAMA	G65697	BLDG & AREA -EB	TRAILERS	
3915071	T	C	EB	200	851 20 FT, 5 TON F/B WAGON	ALABAMA	G65693	BLDG & AREA -EB	TRAILERS	
3915072	T	C	EB	200	851 5 TON	ALABAMA	G65691	BLDG & AREA -EB	TRAILERS	IIPDR
3915073	T	C	EB	200	851 5 TON	BIRMINGHAM TANK	N/A	BLDG & AREA -EB	TRAILERS	
3915074	T	C	WB	100	851 5 TON	UTILITY TRLR	WKSH25440	BLDG & AREA -WB	TRAILERS	
3915075	T	C	WB	100	851 5 TON	BIRMINGHAM TANK	G65762	BLDG & AREA -WB	TRAILERS	
3915076	T	C	EB	200	851 5 TON	ALABAMA	5701	BLDG & AREA -EB	TRAILERS	
3915077	T	C	EB	200	851 20 FT, 5 TON F/B WAGON	ALABAMA	G65699	BLDG & AREA -EB	TRAILERS	
3915078	T	C	WB	100	851 20 FT, 5 TON F/B WAGON	ALABAMA	G65702	BLDG & AREA -WB	TRAILERS	
3915079	T	C	EB	200	851 30 FT, 5 TON F/B WAGON	ALABAMA	C-75034	BLDG & AREA -EB	TRAILERS	
3915080	T	C	WB	100	851 30 FT, 10 TON F/B WAGON	ALABAMA	C-75035	BLDG & AREA -WB	TRAILERS	
3915081	T	C	WB	100	851 10 TON	ALABAMA	C-75036	BLDG & AREA -WB	TRAILERS	IIPDR
3915082	T	C	WB	100	851 30 FT, 10 TON F/B WAGON	ALABAMA	C-75031	BLDG & AREA -WB	TRAILERS	
3915083	T	C	WB	100	851 30 FT, 10 TON F/B WAGON	ALABAMA	C-75032	BLDG & AREA -WB	TRAILERS	
3915084	T	C	WB	100	851 30 FT, 10 TON F/B WAGON	ALABAMA	C-75033	BLDG & AREA -WB	TRAILERS	
3915085	T	C	WB	100	851 30 FT, 10 TON F/B WAGON	ALABAMA	C-75037	BLDG & AREA -WB	TRAILERS	
3915086	T	C	WB	100	851 30 FT, 10 TON F/B WAGON	ALABAMA	C-75038	BLDG & AREA -WB	TRAILERS	
3915087	T	C	WB	100	406 40 FT, 44000 #	DORSEY	63195	BLDG & AREA -WB	TRAILERS	
3915088	T	C	WB	100	406 40 FT, 28 TON VAN	DORSEY	S59828	BLDG & AREA -WB	TRAILERS	IIPD
3915089	T	C	EB	200	406 20 FT, 5 TON F/B WAGON	ALABAMA	G65700	BLDG & AREA -EB	TRAILERS	
3915090	T	C	EB	200	406 18 FT, WAGON	UTILITY TRLR	WKSD25622	BLDG & AREA -EB	TRAILERS	
3915091	T	C	EB	200	406 20 FT, 5 TON F/B WAGON	ALABAMA	G65703	BLDG & AREA -EB	TRAILERS	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3915092	T	E	EB 200	406	CAME ON VACU-ALL	BIRMINGHAM TANK	N/A	BLDG & AREA -EB	TRAILERS	01674R
3915093	T	C	EB 200	406	20 FT, 5 TON F/B WAGON	ALABAMA	G65704	BLDG & AREA -EB	TRAILERS	
3915094	T	C	EB 200	406	20 FT, 5 TON F/B WAGON	N/A	G65690	BLDG & AREA -EB	TRAILERS	
3915095	T	C	EB 200	406	20 FT, 5 TON F/B WAGON	ALABAMA	C65707	BLDG & AREA -EB	TRAILERS	
3915096	T	C	EB 200	406	5 TON	UTILITY TRLR WKS	H25441	BLDG & AREA -EB	TRAILERS	
3915097	T	C	WB 100	406	5 TON 1852	UTILITY TRLR WKS	D25321	BLDG & AREA -WB	TRAILERS	
3915098	T	C	WB 100	406	30 FEET HWY FLATBED	ALABAMA	G65689	BLDG & AREA -WB	TRAILERS	
3915099	T	C	WB 100	406	30 FEET HWY FLATBED	DORSEY	43104	BLDG & AREA -WB	TRAILERS	
3915100	T	C	WB 100	406	TRAILER	N/A	N/A	BLDG & AREA -WB	TRAILERS	
3915101	T	C	WB 100	406	TRAILER	BORWN	N/A	BLDG & AREA -WB	TRAILERS	
3915102	T	C	WB 100	406	TRAILER	BORWN	N/A	BLDG & AREA -WB	TRAILERS	
3915103	T	C	WB 100	406	TRAILER	UTILITY TRLR WKS	H25460	BLDG & AREA -WB	TRAILERS	
3915104	T	C	WB 100	406	TRAILER	N/A	N/A	BLDG & AREA -WB	TRAILERS	
3915105	T	C	WB 100	406	TRAILER	N/A	N/A	BLDG & AREA -WB	TRAILERS	
3915106	T	C	WB 100	406	TRAILER	N/A	N/A	BLDG & AREA -WB	TRAILERS	
3915107	T	C	WB 100	406	TRAILER	N/A	N/A	BLDG & AREA -WB	TRAILERS	
3915108	T	C	WB 100	406	TRAILER	N/A	N/A	BLDG & AREA -WB	TRAILERS	
3915109	T	C	WB 100	406	TRAILER	N/A	N/A	BLDG & AREA -WB	TRAILERS	
3915110	T	C	WB 100	406	TRAILER	N/A	N/A	BLDG & AREA -WB	TRAILERS	
3915111	T	C	WB 100	826	8500 GAL, HWY TANKER	ROADMASTER	118-1	BLDG & AREA -WB	TRAILERS	
3915112	T	C	WB 100	826	4500 G PURE WATER TANK	HEIL	904689	BLDG & AREA -WB	TRAILERS	
3915113	T	C	WB 100	406	4 WHEEL 8 X 10 FT,	GULFCITY	GC-002	BLDG & AREA -WB	TRAILERS	
3915114	T	C	WB 100	406	4 WHEEL 8 X 10 FT,	GULFCITY	GC-004	BLDG & AREA -WB	TRAILERS	
3915115	T	C	WB 100	406	4 WHEEL 8 X 10 FT,	GULFCITY	GC-003	BLDG & AREA -WB	TRAILERS	
3915116	T	C	WB 100	406	4 WHEEL 8 X 10 FT,	GULFCITY	GC-001	BLDG & AREA -WB	TRAILERS	
3915117	T	C	EB 200	826	HWY TANKER	FREUHAUF	OMC1172	BLDG & AREA -EB	TRAILERS	
3915118	T	C	WB 100	826	7200 GAL. HWY TANKER	FREUHAUF	OMC2049	BLDG & AREA -WB	TRAILERS	
3915119	T	C	EB 200	406	100 TON HYD. JACK-UP	CTEC CO.	76-0800	BLDG & AREA -EB	TRAILERS	
3915120	T	C	WB 100	406	100 TON HYD. JACK-UP	CTEC CO.	76-0800	BLDG & AREA -WB	TRAILERS	
3915121	T	C	WB 100	406	40 FT, HWY FLATBED	GREAT DANE	174817	BLDG & AREA -WB	TRAILERS	
3915122	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH DB/WB YARD	TRAILERS	
3915123	T	C	WB 100	406	20 YARD DUMP	PALMER	ST-1372	BLDG & AREA -WB	TRAILERS	
3915124	T	C	WB 100	406	20 YARD DUMP	PALMER	ST-1373	BLDG & AREA -WB	TRAILERS	
3915125	T	C	WB 100	406	20 YARD DUMP	PALMER	ST-1371	BLDG & AREA -WB	TRAILERS	
3915126	T	C	WB 100	406	20 YARD DUMP	PALMER	ST-1374	BLDG & AREA -WB	TRAILERS	
3915127	T	C	WB 100	406	20 FT, 10 TON F/B WAGON	ALABAMA	F77083	BLDG & AREA -WB	TRAILERS	
3915128	T	C	WB 100	406	20 FT, 10 TON F/B WAGON	ALABAMA	F77079	BLDG & AREA -WB	TRAILERS	
3915129	T	C	WB 100	406	20 FT, 10 TON F/B WAGON	ALABAMA	F77080	BLDG & AREA -WB	TRAILERS	
3915130	T	C	WB 100	406	20 FT, 10 TON F/B WAGON	ALABAMA	F77081	BLDG & AREA -WB	TRAILERS	
3915131	T	C	WB 100	406	20 FT, 10 TON F/B WAGON	ALABAMA	F77082	BLDG & AREA -WB	TRAILERS	
3915132	T	C	WB 100	406	16 FT, 5 TON F/B WAGON	ALABAMA	F77086	BLDG & AREA -WB	TRAILERS	
3915133	T	C	WB 100	406	16 FT, 5 TON F/B WAGON	ALABAMA	F77084	BLDG & AREA -WB	TRAILERS	
3915134	T	C	WB 100	406	16 FT, 5 TON F/B WAGON	ALABAMA	F77085	BLDG & AREA -WB	TRAILERS	
3915135	T	C	WB 100	406	16 FT, 5 TON F/B WAGON	ALABAMA	F77087	BLDG & AREA -WB	TRAILERS	
3915136	T	C	WB 100	406	16 FT, 5 TON F/B WAGON	ALABAMA	F77088	BLDG & AREA -WB	TRAILERS	
3915137	T	E	EB 200	816	BOAT TRAILER 16 FT	DIXIE CRAFT	29863	BLDG & AREA -EB	TRAILERS	
3915138	T	C	EB 200	816	18 FT, BOAT TRLR	GATOR	6-286-0	BLDG & AREA -EB	TRAILERS	
3915139	T	C	WB 100	406	20 FT, 10 TON F/B WAGON	ALABAMA	G65692	BLDG & AREA -WB	TRAILERS	
3915140	T	C	WB 131	602	40 FT, HWY VAN	HIGHWAY	77VE2-4	PLANT ENGR BLDG	TRAILERS	

SET NBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
915141	T	C	WB 100	406	5 TON	UTILITY TRLR WKS	H25446	BLDG & AREA -WB	TRAILERS	
915142	T	C	WB 100	406	8 TON	KAMAG	N/A	BLDG & AREA -WB	TRAILERS	
915143	T	C	WB 100	406	TRAILER 5 TON	KAMAG	N/A	BLDG & AREA -WB	TRAILERS	
915144	T	C	WB 100	406	TRAILER 5 TON	KAMAG	N/A	BLDG & AREA -WB	TRAILERS	
915145	T	C	WB 100	406	TRAILER 10 TON	KAMAG	N/A	BLDG & AREA -WB	TRAILERS	
915146	T	C	WB 100	406	TRAILER 10 TON	KAMAG	N/A	BLDG & AREA -WB	TRAILERS	
915147	T	C	WB 125	409	16' TRL W/OIL PURIFIER	GENERAL	202A	COMPR STATION	TRAILERS	
915148	T	C	WB 100	603	MOBILE GAS CYL TLR	REX-ARC	4-31-11	BLDG & AREA -WB	TRAILERS	
915149	T	C	WB 100	602	MOBILE GAS CYL TLR	REX-ARC	4-31-11	BLDG & AREA -WB	TRAILERS	
915150	T	C	WB 131	602	6 X 12' VAN W/P.A. EQUI	WELLS CARGO INC	WW 1211	PLANT ENGR BLDG	TRAILERS	
915152	T	E	WB 131	602	MAINT P.M. TRAILER	N/A	N/A	MAINT/FACIL BLD	TRAILERS	
915156	T	C	WB 100	406	35 TON HYD. JACK-UP	CTEC CO	8007052	BLDG & AREA -WB	TRAILERS	
915157	T	C	WB 100	406	35 TON HYD. JACK-UP	CTEC CO	8007051	BLDG & AREA -WB	TRAILERS	
915158	T	C	WB 100	826	4200 G PURE WATER TANK	N/A	N/A	BLDG & AREA -WB	TRAILERS	
915170	T	C	WB 100	602	TRAILER	N/A	N/A	BLDG & AREA -WB	TRAILERS	
915295	T	C	WB 100	602	TRAILER W/500 GAL TANK	N/A	N/A	BLDG & AREA -WB	TRAILERS	
915296	T	C	EB 211	602	40 FT, HWY FLATBED (FRI	MADDEN	1255	WALKER YD	TRAILERS	3656R
915297	T	C	EB 211	602	40 FT, HWY VAM (FRIG)	THEURER	N24568	WALKER YD	TRAILERS	3656R
915298	T	C	WB 100	406	100 TON HYD. JACK-UP	CTEC CO	8108037	BLDG & AREA -WB	TRAILERS	
915299	T	C	WB 100	406	100 TON HYD. JACK-UP	CTEC CO	8108038	BLDG & AREA -WB	TRAILERS	
915302	T	C	WB 100	406	40 FT, HWY FLATBED	CLARK	1CD2L40	BLDG & AREA -WB	TRAILERS	
915303	T	C	WB 100	406	TRAILER-40 FT FLATBED	CLARK	1CD2L40	BLDG & AREA -WB	TRAILERS	
915304	T	C	WB 100	406	40 FT HWY FLATBED	CLARK	1CD2L40	BLDG & AREA -WB	TRAILERS	
915305	T	C	WB 5	629	8500 GAL. HWY TANKER	TRAILMOBILE	F-40463	RESOURCE RECVRY	TRAILERS	
915306	T	C	WB 5	629	8500 GAL. HWY TANKER	TRAILMOBILE	F-40625	RESOURCE RECVRY	TRAILERS	
915307	T	C	EB 200	890	TRAILER- 10 TON	ALABAMA	C-75036	BLDG & AREA -EB	TRAILERS	
915308	T	C	EB 200	890	40 FT, HWY FLATBED	LUFKIN	34356	BLDG & AREA -EB	TRAILERS	
915309	T	C	WB 114	406	44 FT, 28 TON HWY F/B	HOBBS	FHH-499	TRANSPORTAION	TRAILERS	
915310	T	E	WB 126	406	4500 GAL. HWY TANKER	HEIL	L18377	HOST/FIRE STA	TRAILERS	
915311	T	C	WB 114	602	8500 GAL. HWY TANKER	TRAILMOBILE	K-40405	TRANSPORTAION	TRAILERS	
915312	T	C	WB 114	602	8500 GAL. HWY TANKER	TRAILMOBILE	K-40335	TRANSPORTAION	TRAILERS	
915313	T	C	WB 114	406	40FT, HWY FLATBED	ALABAMA	B-71058	TRANSPORTAION	TRAILERS	
915314	T	C	WB 114	406	40FT, HWY FLATBED	ALABAMA	A-72001	TRANSPORTAION	TRAILERS	
915315	T	C	WB 131	602	TRAILER- FOR TRENCHER	CHARLES MACH	E102537	PLANT ENGR BLDG	TRAILERS	
915316	T	C	WB 104	813	SIDE DUPM WAGON	TOWSLEY	N/A	FAB SHOP	TRAILERS	
915317	T	C	WB 100	406	20 FT, 5 TON F/B WAGON	ALABAMA	G-65705	BLDG & AREA -WB	TRAILERS	
915318	T	C	EB 276	406	40 FT, HWY VAN	TRAILMOBILE	S31A2EA	#12 WHSE	TRAILERS	
915319	T	C	EB 211	406	HYDRAULIC FIFTH WHEEL P	FONTAINE	FC250	WALKER YD	TRAILERS	
915320	T	C	WB 114	406	45 FT, 43 TON HWY F/B	GREAT DANE	1GRDM90	TRANSPORTATION	TRAILERS	
915321	T	C	WB 114	406	45 FT, 43 TON HWY F/B	GREAT DANE	1GRDM90	TRANSPORTATION	TRAILERS	
915322	T	C	WB 114	406	45 FT, 43 TON HWY F/B	GREAT DANE	1GRDM90	TRANSPORTATION	TRAILERS	
915323	T	C	WB 114	406	45 FT, 43 TON HWY F/B	GREAT DANE	1GRDM90	TRANSPORTATION	TRAILERS	
915326	T	C	WB 114	406	100 TON HYD JACK UP	CTEC CO	8507066	TRANSPORTATION	TRAILERS	
915327	T	E	EB 276	816	8 X 22 FT, UTILITY TRAI	INGALLS		#12 WHSE	TRAILERS	
915328	T	C	WB 130	826	65 ALUM. 8500 G. TANKER	TTAILMOBILE	F1154DC	ALUM FAB SHOP	TRAILERS	
915329	T	C	WB 114	629	8750 GAL. TANK TRAILER	FRUEHAUF	OMP6045	TRANSPORTATION	TRAILERS	
915330	T	C	WB 100	406	200 TON TRANSPORTER	CTEC	88-08-7	BLDG & AREA -WB	TRAILERS	
916001	T	C	WB 100	406	30 TON	CLARK	12-8120	BLDG & AREA -WB	STRADDLE CARRIER	2892R
916002	T	C	WB 100	406	50 TON	CLARK	8249	BLDG & AREA -WB	STRADDLE CARRIER	2778R

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3916003	T C	WB	114	406	30 TON V-504C CUMMINS	HYSTER	A14P-18T	RANSPORTATION	STRADDLE CARRIERS	
3916004	T C	WB	114	406	30 TON V-504C CUMMINS	HYSTER	D14P-18T	RANSPORTATION	STRADDLE CARRIERS	
3301000	T C	WB	100	602	SPECIAL SHOP LUBICATION	N/A	DEPT 18	BLDG & AREA -WB	BRIDGE CRANES	
3301001	T C	WB	106	836	100 TON HOOK	WENZLAFF	2312	PANEL SHOP	BRIDGE CRANES	
3301002	T C	WB	107	817	50 TON REVOLVE	SHEPARD NILES	6745-8B	SHOT BLAST	BRIDGE CRANES	
3301003	T C	EB	211	134	BRIDGE CRANE 2 TON	YALE/MIDGET KING	MOD.268	WALKER YD	BRIDGE CRANES	
3301004	T C	EB	280	838	25 TON	INDUSTRAL CRANE	307	#2 PLATEN	BRIDGE CRANES	02130R
3301005	T E	EB	280	838	15 TON	P & H	11768	#2 PLATEN	BRIDGE CRANES	IIPDR
3301006	T E	EB	282	838	25/5 TON	P & H	11048	#7 PLATEN	BRIDGE CRANES	IIPDR
3301007	T E	EB	282	838	15/5 TON	INDUSTRIAL CRANE	273	#7 PLATEN	BRIDGE CRANES	02130R
3301008	T C	EB	235	406	16 TON MAGNETIC	VIA NOVA	MG-001	FAB SHOP	BRIDGE CRANES	IIPDR
3301009	T E	EB	283	838	15 TON	NORTHERN	010	#9 PLATEN	BRIDGE CRANES	IIPDR
3301010	T C	EB	235	813	15 TON	SHAW BOX	BR-20	FAB SHOP	BRIDGE CRANES	IIPDR
3301011	T E	EB	235	813	5 TON (ELECT. HAND)	CHISOLM MOORE	COC-1633	FAB SHOP	BRIDGE CRANES	IIPDR
3301012	T C	EB	235	813	10 TON	MILWAUKEE	BR22	FAB SHOP	BRIDGE CRANES	IIPDR
3301013	T E	EB	235	813	10 TON	CONCO CRANE	BR23	FAB SHOP	BRIDGE CRANES	IIPDR
3301014	T E	EB	283	838	35/10 CRANE	SHEPARE NILES	BR33	#9 PLATEN	BRIDGE CRANES	IIPDR
3301015	T E	EB	283	838	BRIDGE CRANE 35T N/TAG	SHEPARE NILES	BR34	#9 PLATEN	BRIDGE CRANES	IIPDR
3301016	T C	EB	283	838	100/10 TON	SHAW BOX	020	#9 PLATEN	BRIDGE CRANES	IIPDR
3301017	T C	WB	100	602	1 TON (ELECT. HAND)	YALE/BUDGET	EL-38	BLDG & AREA -WB	BRIDGE CRANES	
3301018	T C	WB	100	602	BRIDGE CRANE 1 TON	YALE/BUDGET	EL-39	BLDG & AREA -WB	BRIDGE CRANES	
3301019	T C	WB	100	602	BRIDGE CRANE 1 TON CHN	YALE/BUDGET	34	BLDG & AREA -WB	BRIDGE CRANES	
3301020	T C	WB	100	602	1 TON (ELECT HAND)	YALE/BUDGET	ELE-37	BLDG & AREA -WB	BRIDGE CRANES	
3301021	T C	WB	100	602	1 TON (ELECT. HAND)	YALE/BUDGET	EL-36	BLDG & AREA -WB	BRIDGE CRANES	
3301022	T C	WB	100	602	BRIDGE CRANE 1 TON	YALE/BUDGET	EL-33	BLDG & AREA -WB	BRIDGE CRANES	
3301023	T C	WB	100	602	BRIDGE CRANE 1 TON	YALE/BUDGET	EL-34	BLDG & AREA -WB	BRIDGE CRANES	
3301024	T C	WB	100	602	BRIDGE CRANE 1 TON N/TA	YALE/BUDGET	EL-35	BLDG & AREA -WB	BRIDGE CRANES	
3301025	T E	EB	240	831	1 TON / 10 TON CHAIN	YALE/BUDGET	N/A	PIPE SHOP	BRIDGE CRANES	
3301026	T C	EB	240	831	1 TON CHAIN	YALE/BUDGET	N/A	PIPE SHOP	BRIDGE CRANES	2922R
3301027	T E	EB	240	831	10 TON / TON	YALE/BUDGET	N/A	PIPE SHOP	BRIDGE CRANES	2921R
3301028	T C	EB	240	831	2/10 TON CHAIN	YALE/BUDGET	N/A	PIPE SHOP	BRIDGE CRANES	2920R
3301029	T E	EB	273	203	5 TON	LOAD LIFTER	E4-23	#10 WHSE	BRIDGE CRANES	2925R
3301030	T C	WB	192	825	7.5 TON	CHECO	056005	SHEEMTL-COMB SH	BRIDGE CRANES	
3301031	T C	WB	100	602	BRIDGE CRANE 2 TON	CHECO	056002	BLDG & AREA -WB	BRIDGE CRANES	
3301032	T C	WB	100	0	2 TON	CHECO	29149/0	BLDG & AREA -WB	BRIDGE CRANES	1816R
3301033	T C	WB	191	831	7.5 TON	CHECO	056006	PIPE-COMB SHOP	BRIDGE CRANES	
3301034	T C	WB	100	602	2 TON	CHECO	056003	BLDG & AREA -WB	BRIDGE CRANES	
3301035	T C	WB	190	822	5 TON	CHECO	056001/MACH	-COMB SHOP	BRIDGE CRANES	
3301036	T C	WB	130	851	15/5 TON	READING	C-8193	-ALUM FAB SHOP	BRIDGE CRANES	
3301037	T C	WB	130	851	5 TON	KEANCO	5728	ALUM FAB SHOP	BRIDGE CRANES	
3301038	T C	WB	137	827	6 TON CRANE / HOIST	AMERICAN/P&H	640	N/A /T-BOILER ERECT	BRIDGE CRANES	
3301039	T C	WB	137	827	6 TON CRANE / HOIST	AMERICAN/P&H	640	N/A /T-BOILER ERECT	BRIDGE CRANES	
3301040	T C	EB	269	405	15 TON	P&H	OC-1	#1 WHSE	BRIDGE CRANES	
3301041	T C	EB	281	811	15 TON	P&H	10769	#8 PLATEN	BRIDGE CRANES	
3301042	T C	EB	281	838	15 TON	SHAW BOX	BR29	#8 PLATEN	BRIDGE CRANES	IIPDR
3301043	T E	EB	281	811	15 TON	INDUSTRIAL CRANE	BR30	#8 PLATEN	BRIDGE CRANES	
3301044	T C	WB	104	813	20 TON MAGNET	WENZLAFF	2307	FAB SHOP	BRIDGE CRANES	
3301045	T C	WB	104	813	20 TON MAGNET	WENZLAFF	2306	FAB SHOP	BRIDGE CRANES	
3301046	T E	EB	104	813	20 TON HOOK	WENZLAFF	2302	FAB SHOP	BRIDGE CRANES	

SSET JMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3301047	T	C	WB 104	813	20 TON HOOK	WENZLAFF	2304	FAB SHOP	BRIDGE CRANES	
3301048	T	C	WB 104	813	20 TON HOOK	WENZLAFF	2309	FAB SHOP	BRIDGE CRANES	
3301049	T	C	WB 104	813	20 TON MAGNET	WENZLAFF	2305	FAB SHOP	BRIDGE CRANES	
3301050	T	C	WB 104	813	20 TON HOOK	WENZLAFF	2301	FAB SHOP	BRIDGE CRANES	
3301051	T	C	WB 104	813	15 / 5 TON HOOK	WENZLAFF	2302	FAB SHOP	BRIDGE CRANES	
3301052	T	C	WB 105	837	50/10 TON HOOK	WENZLAFF	2311	SHELL SHOP	BRIDGE CRANES	
3301053	T	C	WB 105	837	50/ 10 TON HOOK	WENZLAFF	2310	SHELL SHOP	BRIDGE CRANES	
3301054	T	C	WB 106	836	20 TON MAGNET	WENZLAFF	2308	PANEL SHOP	BRIDGE CRANES	
3301055	T	C	WB 106	836	70 TON TURNOVER	EDERER	E5416	PANEL SHOP	BRIDGE CRANES	
3301056	T	C	WB 275	601	10 / 5 TON HOOK	INDUSTRIAL CRANE	BR32	#11 WHSE	BRIDGE CRANES	
3301057	T	C	EB 250	601	5 TON CRANE OC-15	P&H	T-38831	SORB	BRIDGE CRANES	
3301058	T	C	EB 250	601	5 TON CRANE OC-13	R & M	L.M.225	SORB	BRIDGE CRANES	
3301059	T	C	EB 250	448	5 TON CRANE OC- 12	R & M	461280/	SORB	BRIDGE CRANES	IIPDR
3301060	T	C	EB 250	448	30 TON CRANE OC-8/8A	R & M	461290/	SORB	BRIDGE CRANES	2924R
3301061	T	E	EB 250	601	5 TON	R & M	OC19	SORB	BRIDGE CRANES	
3301062	T	E	EB 222	822	20/5 TON HOOK	MILWAUKEE CRANE	1129001	MACH SHOP	BRIDGE CRANES	
3301063	T	C	WB 130	851	5 TON	CHECO	2501-D	ALUM FAB SHOP	BRIDGE CRANES	
3301064	T	E	EB 250	601	3 TON	WRIGHT	T2645	SORB	BRIDGE CRANES	
3301065	T	C	EB 222	822	5 TON	INDUSTRIAL CRANE	278 36	MACH SHOP	BRIDGE CRANES	
3301066	T	C	WB 191	831	7.5 TON BOTT.RUN	R & M	C1383	PIPE-COMB SHOP	BRIDGE CRANES	
3301067	T	C	EB 236	843	5 TON	KRANCO	31	ELEC SHOP	BRIDGE CRANES	
3301068	T	C	WB 191	827	8.5 TON BOT.RUN	R & M	N/A	PIPE-COMB SHOP	BRIDGE CRANES	
3301069	T	C	EB 240	831	2 TON	P & H	EL98	PIPE SHOP	BRIDGE CRANES	IIPDR
3301070	T	C	EB 240	831	2 TON	P & H	EL99	PIPE SHOP	BRIDGE CRANES	IIPDR
3301071	T	E	EB 231	825	2 TON	WHITING TRAMBEAM	N/A	SHEETMTL SHOP	BRIDGE CRANES	IIPDR
3301072	T	C	EB 240	831	2 TON	P & H	EL110	PIPE SHOP	BRIDGE CRANES	IIPDR
3301073	T	C	EB 240	831	2 TON	P & H	EL110	PIPE SHOP	BRIDGE CRANES	IIPDR
3301074	T	C	EB 222	822	20.5 TON	ROBBINS & MYERS	35477FJ	MACH SHOP	BRIDGE CRANES	
3301075	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EB/WB YD	BRIDGE CRANES	2922R
3301076	T	C	WB 192	831	81/2T BOTTOM RUN W/HST	AMER. CRANE	C1254	SHEEMTL-COMB SH	BRIDGE CRANES	
3301077	T	C	WB 191	831	81/2T BOTTOM RUN W/HST	AMER. CRANE	C1254	PIPE-COMB SHOP	BRIDGE CRANES	
3301078	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EB/WB YD	BRIDGE CRANES	
3301079	T	C	EB 240	831	2 TON OVERHEAD TRAM RL	P & H	EL107	PIPE SHOP	BRIDGE CRANES	IIPDR
3301080	T	C	EB 240	831	2 TON OVERHEAD TRAM RL	P & H	EL108	PIPE SHOP	BRIDGE CRANES	IIPDR
3301081	T	C	EB 240	831	2 TON OVERHEAD TRAM RL	P & H	EL106	PIPE SHOP	BRIDGE CRANES	IIPDR
3301082	T	C	WB 104	813	20 TON BRIDGE CRANE	ORLEY MYERS	3815	FAB SHOP	BRIDGE CRANES	
3301084	T	C	WB 191	831	7.5 TON	DEXIE/ROBBINS &	44895MG	PIPE-COMB SHOP	BRIDGE CRANES	
3301085	T	C	WB 191	831	7.5 TON	DEXIE/ROBBINS &	44895MG	PIPE-COMB SHOP	BRIDGE CRANES	
3301086	T	C	EB 282	890	15 TON	P & H	1176	#7 PLATEN	BRIDGE CRANES	
3301087	T	C	EB 235	890	15 TON	P & H	11048	FAB SHOP	BRIDGE CRANES	
3301088	T	C	WB 104	813	20 T. (2) 20&5 T. HOIS	VIA NOVA/DESHAZO	147661P	FAB SHOP	BRIDGE CRANES	
3301089	T	C	WB 104	813	15 TON	NORTHERN/DESHAZO	2202(HO	FAB SHOP	BRIDGE CRANES	
3301090	T	C	WB 104	813	15 TON	SHAW BOX/YALE	AX22060	FAB SHOP	BRIDGE CRANES	
3301091	T	C	EB 235	890	10/2 TON	CHISOLM MOORE/DRC	-1633/	FAB SHOP	BRIDGE CRANES	
3301092	T	C	EB 235	890	10 TON (15 TON)	MILWAUKEE/R&M	BR22/48	FAB SHOP	BRIDGE CRANES	
3301093	T	C	EB 235	890	10/ 15 TON.	CONCO	3012/76	FAB SHOP	BRIDGE CRANES	
3301094	T	C	EB 283	890	35/10 TON	SHEPARD/NILE	N/A	#9 PLATEN	BRIDGE CRANES	
3301095	T	C	EB 283	890	100/10 TON	SHAW BOX	BR20	#9 PLATEN	BRIDGE CRANES	
3301096	T	C	EB 273	890	5 TON (BRIDGE ONLY)	CHISOLM MOORE	34-23	#10 WHSE	BRIDGE CRANES	2925R

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3301097	T	C EB	282	890	15 TON	SHAW BOX	N/A	#7 PLATEN	BRIDGE CRANES	
3301098	T	C EB	235	890	2 TON UNDERHUNG	COEVELAND/P&H	32T-35848	FAB SHOP	BRIDGE CRANES	
3301099	T	C EB	240	890	2 TON UNDERHUNG	CLEVELAND/P&H	T-45848	PIPE SHOP	BRIDGE CRANES	
3301100	T	C EB	240	890	2 TON UNDERHUNG	CLEVELAND/P&H	T-35848	PIPE SHOP	BRIDGE CRANES	
3301101	T	C EB	240	890	2 TON UNDERHUNG	CLEVELAND/P&H	T358485	PIPE SHOP	BRIDGE CRANES	
3301102	T	C EB	240	890	2 TON UNDERHUNG	CLEVELAND/P&H	T-35848	PIPE SHOP	BRIDGE CRANES	
3301103	T	C EB	240	890	2 TON UNDERHUNG	CLEVELAND/P&H	T-35848	PIPE SHOP	BRIDGE CRANES	
3301104	T	C EB	240	890	1 TON UNDERHUNG	CLEVELAND/P&H	T-35848	PIPE SHOP	BRIDGE CRANES	
3301105	T	C EB	280	890	20/5 TON HOOK	DESHAZO/P&H	T58657	(#2 PLATEN	BRIDGE CRANES	
3301106	T	C EB	279	890	20/5 TON HOOK	DESHAZO/P&H	T58656	(#1 PLATEN	BRIDGE CRANES	
3301107	T	C EB	260	890	5 TON HOOK	R & M	461280	/#7 HH/WAY	BRIDGE CRANES	
3301108	T	C EB	283	890	1 TON UNDERHUNG HOOK	ACCO LOUDER/COFF	8278MR	#9 PLATEN	BRIDGE CRANES	
3301109	T	C EB	235	890	4/2/2 TON	DESHAZO/P&H/P&H	1746-1	/FAB SHOP	BRIDGE CRANES	
3301110	T	C EB	235	890	4/2/2 TON	DESHAZO/P&H/P&H	1746-2	/FAB SHOP	BRIDGE CRANES	
3301111	T	C EB	235	890	7.5 TON	DESHAZO/P&H	1745-2	/FAB SHOP	BRIDGE CRANES	
3301112	T	C EB	235	890	5 TON	DESHAZO/P&H	1745-2	/FAB SHOP	BRIDGE CRANES	
3301113	T	C EB	235	890	5 TON	DESHAZO/P&H	1744/88	FAB SHOP	BRIDGE CRANES	
3301114	T	C EB	235	890	5 TN TOP RUNNING	DESHAZO/P&H	1742-2	FAB SHOP	BRIDGE CRANES	
3301115	T	C EB	235	890	2 TON TOP RUNNING	DESHAZO/P&H	1743-1	/FAB SHOP	BRIDGE CRANES	
3301116	T	C EB	235	890	2 TON TOP RUNNING	DESHAZO/P&H	1743-2	/FAB SHOP	BRIDGE CRANES	
3301117	T	C EB	235	890	2 TON TOP RUNNING	DESHAZO/P&H	1743-3	/FAB SHOP	BRIDGE CRANES	
3301118	T	C EB	235	890	2 TON UNDERHUNG	SPANMASTER	610715	(FAB SHOP	BRIDGE CRANES	
3301119	T	C EB	235	890	2 TON UNDERHUNG	SPANMASTER	610716	(FAB SHOP	BRIDGE CRANES	
3301120	T	C EB	235	890	5 TON UNDRHUNG	SPANMASTER	B6827-3	FAB SHOP	BRIDGE CRANES	
3301121	T	C EB	235	890	5 TON UNDRHUNG	SPANMASTER	91709J7	FAB SHOP	BRIDGE CRANES	
3301122	T	C EB	235	890	3 TON UNDERHUNG	SPANMASTER	91703D7	FAB SHOP	BRIDGE CRANES	
3301123	T	C EB	235	890	3 TON UNDERHUNG	SPANMASTER	91703E7	FAB SHOP	BRIDGE CRANES	
3301124	T	C EB	235	890	3 TON UNDERHUNG	SPANMASTER	91703D7	FAB SHOP	BRIDGE CRANES	
3301125	T	C EB	235	890	3 TON UNDERHUNG	SPANMASTER	91703D7	FAB SHOP	BRIDGE CRANES	
3301126	T	C EB	235	890	2 TON UNDERHUNG	SPANMASTER	610414	FAB SHOP	BRIDGE CRANES	
3301127	T	C EB	235	890	2 TON UNDERHUNG	SPANMASTER	610712	FAB SHOP	BRIDGE CRANES	
3301128	T	C EB	235	890	2 TON UNDERHUNG	SPANMASTER/P&H	610713	(FAB SHOP	BRIDGE CRANES	
3301129	T	C EB	235	890	2 TON UNDERHUNG	SPANMASTER/P&H	610711	(FAB SHOP	BRIDGE CRANES	
3301130	T	C EB	231	890	2 TON (.5 TON)	WHITING TRAM BEAW	4976-C	SHEETMET SHOP	BRIDGE CRANES	
3301131	T	C EB	231	890	2 TON (NO HOIST)	WHITING TRAM BEAW	4976/C	SHEETMET SHOP	BRIDGE CRANES	
3301132	T	C EB	231	890	1 TON UNDERHUNG	SPANMASTER/P&H	610719	(SHEETMET SHOP	BRIDGE CRANES	
3301133	T	C EB	231	890	1 TON UNDERHUNG	SPANMASTER/P&H	610717	(SHEETMET SHOP	BRIDGE CRANES	
3301134	T	C EB	231	890	1 TON UNDERHUNG	SPANMASTER/P&H	610718	(SHEETMET SHOP	BRIDGE CRANES	
3301135	T	C EB	231	890	1 TON UNDERHUNG	SPANMASTER/P&H	610721	(SHEETMET SHOP	BRIDGE CRANES	
3301136	T	C EB	231	890	1 TON UNDERHUNG	SPANMASTER/P&H	610725	(SHEETMET SHOP	BRIDGE CRANES	
3301137	T	C EB	231	890	1 TON UNDERHUNG	SPANMASTER/P&H	610720	(SHEETMET SHOP	BRIDGE CRANES	
3301138	T	C EB	231	890	1 TON UNDERHUNG	SPANMASTER/P&H	610719	(SHEETMET SHOP	BRIDGE CRANES	
3301139	T	C EB	231	890	1 TON UNDERHUNG	SPANMASTER/P&H	610726	(SHEETMET SHOP	BRIDGE CRANES	
3301140	T	C EB	231	890	1 TON UNDERHUNG	SPANMASTER/P&H	610722	(SHEETMET SHOP	BRIDGE CRANES	
3301141	T	C EB	231	890	1 TON UNDERHUNG	SPANMASTER/P&H	610723	(SHEETMET SHOP	BRIDGE CRANES	
3301142	T	C EB	231	890	3 TON UNDERHUNG	ACCO LOUDEN/COFF	D21213-S	HEETMET SHOP	BRIDGE CRANES	
3301143	T	C EB	283	890	1 TON UNDERHUNG HOOK	ACCO LOUDEN/COFF	8279MR	#9 PLATEN	BRIDGE CRANES	
3301144	T	C EB	260	890	5 TON HOOK	R & M	461280	/#7 HH/WAY	BRIDGE CRANES	
3301145	T	C WB	106	836	5 TON HOOK(W/R&M HOIST)	SHEPARD NILES/DEN/A/177		PANEL SHOP	BRIDGE CRANES	

SET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3301146	T	C WB	133	397	1/4 TON BRIDGE CRANE	DEMAG	4216	WET DK BLDG	BRIDGE CRANES	
3301147	T	C WB	130	851	20 TO BRIDGE CRANE	ISD/DESHAZO/BOWLN/A	/40	ALUM FAB SHOP	BRIDGE CRANES	
3301148	T	C WB	17	811	20 TON HOOK	ISD/DESHAZO/BOWLNA/4462		COVERED SLAB AR	BRIDGE CRANES	
3301149	T	C WB	17	811	20 TON HOOK	ISD/DESHAZO/BOWLNA/4462		COVERED SLAB AR	BRIDGE CRANES	
3301150	T	C WB	17	811	20 TON HOOK	ISD/DESHAZO/BOWLNA/4462		COVERED SLAB AR	BRIDGE CRANES	
3301151	T	C WB	17	811	50 TON HOOK	ISD/DESHAZO/BOWLNA/4513		COVERED SLAB AR	BRIDGE CRANES	
3301152	T	C WB	17	811	50 TON HOOK	ISD/DESHAZO/BOWLNA/4513		COVERED SLAB AR	BRIDGE CRANES	
3301153	T	C WB	17	811	50 TON HOOK	ISD/DESHAZO/BOWLNA/4513		COVERED SLAB AR	BRIDGE CRANES	
3301154	T	C WB	17	811	50 TON HOOK	ISD/DESHAZO/BOWLNA/4513		COVERED SLAB AR	BRIDGE CRANES	
3301155	T	C WB	17	811	125 TON HOOK	ISD/DESHAZO/BOWLNA/4510		COVERED SLAB AR	BRIDGE CRANES	
3301156	T	C WB	17	811	125 TON HOOK	ISD/DESHAZO/BOWLNA/4510		COVERED SLAB AR	BRIDGE CRANES	
3301157	X	O WB	0	0	UNASSIGNED	ISD/DESHAZO/BOWL	N/A	BOTH EB/WB YD	BRIDGE CRANES	
3301158	T	C WB	20	822	20 TON HOOK	ISD/DESHAZO/BOWL	N/A	MACH. PKG. AREA	BRIDGE CRANES	
3301159	T	C WB	20	822	7.5 TON HOOK	ISD/DESHAZO/BOWL	N/A	MACH. PKG. AREA	BRIDGE CRANES	
3302001	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EB/WB YD	GANTRY CRANES	
3302002	T	C WB	0	0	10 TON HOOK	EDERER	1401001	BOTH EB/WB YD	GANTRY CRANES	
3302003	T	C WB	0	0	10 TON	EDERER	1901001	BOTH EB/WB YD	GANTRY CRANES	
3302004	T	C WB	106	813	15 TON HOOK	DRUPP/DESHAZO	TR2280/20	PANEL SHOP	GANTRY CRANES	
3302005	T	C WB	104	813	5 TON MAGNET SEMIGANTRY	KRUPP	6545120	FAB SHOP	GANTRY CRANES	
3302006	T	C WB	104	331	20 TON MAGNET/BERTHA	KRUPP	2367-96	FAB SHOP	GANTRY CRANES	
3302007	T	C WB	154	815	15 TO HOOK	KRANCO	5916	SUB-ASSY-BAY1	GANTRY CRANES	2127R
3302008	T	C WB	159	839	40 TON HOOK	EDERER	6047	NOD-ASSY BAY 1	GANTRY CRANES	
3302009	T	C WB	155	839	40 TON HOOK	KRANCO	6378/K	SUB ASSY BAY2	GANTRY CRANES	
3302010	T	C WB	155	839	40 TON HOOK	KRANCO	6379/K	SUB ASSY BAY2	GANTRY CRANES	
3302011	T	C WB	155	839	15 TON HOOK	KRANCO	5915	SUB ASSY BAY2	GANTRY CRANES	2127R
3302012	T	C WB	156	839	15 TON HOOK	KRANCO	5918	SUB ASSY BAY 3	GANTRY CRANES	2127R
3302013	T	C WB	157	839	40 TON HOOK	KRANCO	6380/K5	SUB ASSY BAY 4	GANTRY CRANES	
3302014	T	C WB	157	839	40 TON HOOK	KRANCO	6381/K6	SUB ASSY BAY 4	GANTRY CRANES	
3302015	T	C WB	158	839	40 TON HOOK	EDERER	E9370	SUB ASSY BAY 5	GANTRY CRANES	
3302016	T	C WB	158	839	15 TON HOOK	KRANCO	5917	SUB ASSY BAY 5	GANTRY CRANES	2127R
3302017	T	C WB	130	851	20 TON HOOK	KRANCO	6376/K1	ALUM FAB SHOP	GANTRY CRANES	
3302018	T	C WB	130	851	20 TON HOOK	KRANCO	6377/K2	ALUM FAB SHOP	GANTRY CRANES	
3302019	T	E EB	225	602	1 TON HAND OPERATED	LOAD LIFTER	N/A	WELD MACH REP	GANTRY CRANES	IIPDR
3302020	T	C EB	233	813	16 TON MAGNET	VIA NOVA	15	PLATE STOR FAB	GANTRY CRANES	IIPDR
3302021	T	C WB	100	602	OVERHAUL (SPARES)	N/A	LABOR OB	LDG & AREA -WB	GANTRY CRANES	9999R
3302022	T	C WB	154	600	15 TON HOOK R&M HOIST	KRANCO	8641	SUB ASSY BAY 1	GANTRY CRANES	
3302023	T	C WB	156	600	15 TON HOOK R&M HOIST	KRANCO	8640	SUB ASSY BAY 3	GANTRY CRANES	
3302024	T	C WB	158	400	15 TON HOOK P&H HOIST	KRANCO	8642	SUB ASSY BAY 5	GANTRY CRANES	
3302025	T	C WB	158	400	15 TON HOOK P&H HOIST	KRANCO	8643	SUB ASSY BAY 5	GANTRY CRANES	
3302026	T	C EB	235	890	16 TON MAGNET	VIA NOVA	15	FAB SHOP	GANTRY CRANES	
3302027	T	C EB	225	890	1 TON HAND OPERATER	LOAD LIFTER	F1/21300	IVR	WELD MACH REP	GANTRY CRANES
3302031	T	C EB	236	843	2 TON SELF STANDING	WALLACE S4T12S	10761010	ELEC SHOP	GANTRY CRANES	
3302032	T	C WB	3	851	20 TON HOOK (W. PLATEN)	ISD/DESHAZO/BOLINA/4019		TRACK 1 NORTH	GANTRY CRANES	
3302033	T	C WB	3	851	20 TN HOOK (E. PLATEN)	ISD/DESHAZO/BOLINA/4019		TRACK 1 NORTH	GANTRY CRANES	
3302034	T	C WB	155	601	20 TON GANTRY CRANE	ISD/DESHAZO/BOLINA/4019		SUB ASSY BAY 2	GANTRY CRANES	
3302035	T	C WB	20	822	7.5 TON SEMI GANTRY	ISD/DESHAZO/BOWL	N/A	MACH. PLG. AREA	GANTRY CRANES	
3303000	T	O WB	100	602	E/B STARTUP/SHOREPOWER	N/A	GEN PUR	BLDG & AREA -WB	PORTAL CRANES	
3303001	T	C WB	100	400	200 TON LEVEL LUFFING 1	HENSEN 125 FT. L	6231	BLDG & AREA -WB	PORTAL CRANES	9999
3303002	T	C WB	100	400	200 TON LEVEL LUFFING 2	HENSEN 125 FT. L	6232	BLDG & AREA -WB	PORTAL CRANES	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3303003	T	C	WB	100	400 200 TON LEVEL LUFFING 3	HENSEN 125 FT. L	6233	BLDG & AREA -WB	PORTAL CRANES	
3303004	T	C	WB	100	400 200 TON LEVEL LUFFING 4	HENSEN 125 FT. L	6234	BLDG & AREA -WB	PORTAL CRANES	
3303005	T	C	WB	100	400 200 TON LEVEL LUFFING 5	HENSEN 125 FT. L	6235	BLDG & AREA -WB	PORTAL CRANES	
3303006	T	C	WB	100	400 200 TON LEVEL LUFFING 6	HENSEN 125 FT. L	6236	BLDG & AREA -WB	PORTAL CRANES	9999
3303007	X	C	WB	100	0 40 TON	AMERICAN	62798	BLDG & AREA -WB	PORTAL CRANES	00909R
3303008	T	C	WB	100	400 39 TON	AMERICAN	310	BLDG & AREA -WB	PORTAL CRANES	
3303009	T	C	WB	100	400 39 TON	AMERICAN	236	BLDG & AREA -WB	PORTAL CRANES	
3303010	T	C	WB	100	0 75 TON	WASH IRON RON WO	6047	BLDG & AREA -WB	PORTAL CRANES	00911R
3303011	T	C	WB	100	400 75 TON	WASH IRON 24-152	6048	BLDG & AREA -WB	PORTAL CRANES	
3303012	X	C	WB	100	602 50 TON	AMERICAN	237	BLDG & AREA -WB	PORTAL CRANES	00910R
3303013	T	C	WB	100	400 50 TON LUFFING WHIRLEY	FRIED-KRUPP ARDE	205853	BLDG & AREA -WB	PORTAL CRANES	
3303014	T	C	WB	100	400 50 TON	AMERICAN*R-25	70/5439	BLDG & AREA -WB	PORTAL CRANES	9999
3303015	T	C	EB	301	400 65 TON	AMERICAN	R-1039/	GRAVING DOCK	PORTAL CRANES	
3303016	T	C	EB	301	400 25 TON	AMERICAN	253	GRAVING DOCK	PORTAL CRANES	
3303017	T	C	EB	267	400 50 TON	AMERICAN	311	#4 PIER	PORTAL CRANES	
3303018	T	C	EB	266	400 50 TON	AMERICAN	308	#3 PIER	PORTAL CRANES	
3303019	T	C	EB	266	400 50 TON	AMERICAN	388	#3 PIER	PORTAL CRANES	
3303020	T	C	EB	265	400 50 TON	AMERICAN	285	#2 PIER	PORTAL CRANES	
3303021	T	C	EB	267	400 50 TON	AMERICAN	5532	#4 PIER	PORTAL CRANES	
3303022	T	C	EB	264	400 33 TON	AMERICAN	175	#1 PIER	PORTAL CRANES	
3303023	T	C	EB	264	400 33 TON	AMERICAN	170	#1 PIER	PORTAL CRANES	
3303024	T	C	EB	265	400 33 TON	AMERICAN	209	#2 PIER	PORTAL CRANES	
3303025	T	C	EB	260	400 50 TON	AMERICAN	208	#7 HH/WAY	PORTAL CRANES	IIPDR
3303026	T	C	EB	259	400 50 TON	AMERICAN	235	#6 HH/WAY	PORTAL CRANES	IIPDR
3303027	T	C	WB	100	400 50 TON	AMERICAN*R-25	70-5439	BLDG & AREA -WB	PORTAL CRANES	9999
3303028	T	C	WB	100	400 75 TON	WASH IRON RON WO	6177	BLDG & AREA -WB	PORTAL CRANES	9999
3303029	T	C	WB	100	400 75 TON	WASH IRON RON WO	N/A	BLDG & AREA -WB	PORTAL CRANES	9999
3303030	T	C	WB	100	400 75 TON	WASH IRON RON WO	6179	BLDG & AREA -WB	PORTAL CRANES	9999
3303031	T	C	WB	100	602 OVERHAUL (SPARES)	N/A	LABOR OB	BLDG & AREA -WB	PORTAL CRANES	9999R
3303032	T	C	EB	259	890 50/15 TON	AMERICAN*R-25	235	#6 HH/WAY	PORTAL CRANES	
3303033	T	C	EB	260	890 50/15 TON	AMERICAN*R-25	208	#7 HH/WAY	PORTAL CRANES	
3303034	T	C	WB	100	400 100 TON PORTAL CRANE	AMERICAN*LSB-10	R-1191	BLDG & AREA -WB	PORTAL CRANES	
3303035	T	C	WB	100	602 100 TON PORTAL CRANE	AMERICAN*LSB-10	R-1192	BLDG & AREA -WB	PORTAL CRANES	
3303036	T	C	WB	100	400 100 TON PORTAL CRANE	AMERICAN*LSB-10	R-1193	BLDG & AREA -WB	PORTAL CRANES	
3303037	T	C	WB	100	400 100 TON PORTAL CRANE	AMERICAN*LSB-10	R-1194	BLDG & AREA -WB	PORTAL CRANES	
3303038	T	C	WB	100	400 300/25 TON PORTAL CRANE	AMERICAN*LSB-18	R-1195	BLDG & AREA -WB	PORTAL CRANES	
3303039	T	C	WB	100	400 300/25 TON PORTAL CRANE	AMERICAN*LSB-18	R-1196	BLDG & AREA -WB	PORTAL CRANES	
3303040	T	C	WB	100	400 300/25 TON PORTAL CRANE	AMERICAN*LSB-18	R-1197	BLDG & AREA -WB	PORTAL CRANES	
3305001	T	C	EB	215	807 JIB BOOM CRANE 1 TON	YALE	N/A	GALV/TEF BLDG.	JIB CRANES/PWR	3024R
3305002	T	C	WB	191	827 JIB CRANE ELECT 1 TON	ABELL HOWE/YALE	69B1181	PIPE-COMB SHOP	JIB CRANES/PWR	3024R
3305003	T	E	EB	191	827 JIB CRANE ELECT 1 TON	ABELL HOWE CO.	SN33497	PIPE-COMB SHOP	JIB CRANES/PWR	
3305004	T	C	WB	191	444 JIB CRANE ELECT 1 TON	ABELL HOWE CO.	334972	PIPE-COMB SHOP	JIB CRANES/PWR	3024R
3305005	T	C	WB	191	831 JIB CRANE ELECT 1 TON	ABELL HOWE CO.	69B1181	PIPE-COMB SHOP	JIB CRANES/PWR	3024R
3305006	T	C	WB	191	831 JIB CRANE ELECT 1 TON	ABELL HOWE CO.	69B1181	PIPE-COMB SHOP	JIB CRANES/PWR	2879R
3305007	T	C	WB	191	831 JIB CRANE ELECT 1 TON	ABELL HOWE CO.	69B1181	PIPE-COMB SHOP	JIB CRANES/PWR	2879R
3305008	T	C	WB	191	831 JIB CRANE ELECT 1 TON	ABELL HOWE CO.	69B1181	PIPE-COMB SHOP	JIB CRANES/PWR	2879R
3305009	T	C	WB	191	831 JIB CRANE ELECT 1 TON	ABELL HOWE CO.	69B1181	PIPE-COMB SHOP	JIB CRANES/PWR	2879R
3305010	T	C	WB	191	831 JIB CRANE ELECT 1 TON	ABELL HOWE CO.	MS3123	PIPE-COMB SHOP	JIB CRANES/PWR	3024R
3305011	T	C	WB	191	831 JIB CRANE ELECT 1 TON	ABELL HOWE CO.	MS3126	PIPE-COMB SHOP	JIB CRANES/PWR	

ET BER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
305012	T	C	WB 191	831	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	MS3120	PIPE-COMB SHOP	JIB CRANES/PWR	3024R
305013	T	C	WB 130	851	JIB CRANE	ABELL HOWE CO.	75B5575	ALUM FAB SHOP	JIB CRANES/PWR	
305014	T	C	WB 130	851	JIB CRANE ELECT 2 TON	ABELL HOWE CO.	75B5575	ALUM FAB SHOP	JIB CRANES/PWR	
305015	T	C	WB 130	851	JIB CRANE ELECT 2 TON	ABELL HOWE CO.	ALUM.FA	ALUM FAB SHOP	JIB CRANES/PWR	
305016	T	C	WB 130	851	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	75B5575	ALUM FAB SHOP	JIB CRANES/PWR	
305017	T	C	WB 130	851	JIB CRANE ELECT 2 TON	RELIABLE/YALE	ALUM.FA	ALUM FAB SHOP	JIB CRANES/PWR	
305018	T	C	WB 130	813	JIB CRANE ELECT 2 TON	RELIABLE/YALE	ALUM.FA	ALUM FAB SHOP	JIB CRANES/PWR	
305019	T	C	WB 104	813	JIB CRANE ELECT 1 TON	YALE	STL.FAB	FAB SHOP	JIB CRANES/PWR	
305020	T	C	WB 104	813	JIB CRANE ELECT 1 TON	YALE	STL.FAB	FAB SHOP	JIB CRANES/PWR	
305021	T	C	WB 104	813	JIB CRANE ELECT 1 TON	YALE	STL.FAB	FAB SHOP	JIB CRANES/PWR	
305022	T	C	WB 104	813	JIB CRANE ELECT 5 TON	RELIABLE	STL.FAB	FAB SHOP	JIB CRANES/PWR	
305023	T	C	WB 104	813	JIB CRANE ELECT 5 TON	RELIABLE CRANE/R	STL.FAB	FAB SHOP	JIB CRANES/PWR	
305024	T	C	WB 104	813	JIB CRANE ELECT 1 TON	ROBBINS & MEYERS	STL.FAB	FAB SHOP	JIB CRANES/PWR	
305025	T	C	WB 104	813	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	69B1181	FAB SHOP	JIB CRANES/PWR	
305026	T	C	WB 104	813	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	69B1181	FAB SHOP	JIB CRANES/PWR	
305027	T	C	WB 104	813	JIB CRANE ELECT 1.5 TON	WRIGHT	STL.FAB	FAB SHOP	JIB CRANES/PWR	
305028	T	C	WB 104	813	JIB CRANE	YALE HOIST	STL.FAB	FAB SHOP	JIB CRANES/PWR	
305029	T	C	WB 104	813	JIB CRANE HYD	SCOTT MIDLAND	7006	FAB SHOP	JIB CRANES/PWR	
305030	T	C	WB 104	813	JIB CRANE HYD	STRATTON	QA10662	FAB SHOP	JIB CRANES/PWR	
305031	T	C	WB 104	813	JIB CRANE ELECT 1-1/I	WRIGHT	STL.FAB	FAB SHOP	JIB CRANES/PWR	
305032	T	C	WB 104	813	JIB CRANE ELECT 1-1/2 T	WRIGHT	STL.FAB	FAB SHOP	JIB CRANES/PWR	
305033	T	C	WB 104	813	JIB CRANE ELECT 0.5 TON	YALE	STL.FAB	FAB SHOP	JIB CRANES/PWR	
305034	T	C	EB 221	602	JIB CRANE PNEUMATIC	N/A	B876	FAB SHOP	JIB CRANES/PWR	
305035	T	C	EB 222	822	JIB CRANE ELECT 1 TON	YALE	N/A	MACH ASSY	JIB CRANES/PWR	
305036	T	C	WB 100	602	JIB CRANE HYD	SUPERMASTER	9902	MACH SHOP	JIB CRANES/PWR	
305037	T	C	WB 131	602	JIB CRANE ELECT 1 TON	N/A	N/A	BLDG & AREA -WB	JIB CRANES/PWR	
305038	T	C	WB 128	602	JIB CRANE ELECT 2 TON	YALE	N/A	MAINT/FACIL BLD	JIB CRANES/PWR	
305039	T	C	WB 128	602	JIB CRANE ELECT 2 TON	YALE	N/A	COMBINE SHOP	JIB CRANES/PWR	
305040	T	C	WB 104	827	JIB CRANE ELECT 2 TON	WRIGHT	N/A	COMINE SHOP	JIB CRANES/PWR	
305041	T	C	WB 104	827	JIB CRANE ELECT 5 TON	BOBBINS & MEYERS	N/A	FAB SHOP	JIB CRANES/PWR	
305042	T	C	WB 104	813	JIB CRANE ELECT 5 TON	BOBBINS & MEYERS	N/A	FAB SHOP	JIB CRANES/PWR	
305043	T	C	WB 104	813	JIB CRANE ELECT 5 TON	BOBBINS & MEYERS	N/A	FAB SHOP	JIB CRANES/PWR	3083R
305045	T	C	WB 106	813	JIB CRANE ELECT .5 TON	CONCO CRANE	N/A	PANEL SHOP	JIB CRANES/PWR	
305046	T	C	WB 106	813	JIB CRANE ELECT .5 TON	CONCO CRANE	N/A	PANEL SHOP	JIB CRANES/PWR	
305047	T	C	WB 106	822	JIB CRANE ELECT .5 TON	CONCO CRANE	N/A	PANEL SHOP	JIB CRANES/PWR	
305048	T	C	WB 106	836	JIB CRANE ELECT .5 TON	CONCO CRANE	N/A	PANEL SHOP	JIB CRANES/PWR	
305049	T	C	EB 222	836	JIB CRANE ELECT 1 TON	YALE	N/A	MACH SHOP	JIB CRANES/PWR	
305050	T	C	EB 222	836	JIB CRANE ELECT 1 TON	YALE	N/A	MACH SHOP	JIB CRANES/PWR	
305051	T	C	EB 222	836	JIB CRANE ELECT 1 TON	YALE	N/A	MACH SHOP	JIB CRANES/PWR	
305052	T	C	EB 222	822	JIB CRANE ELECT 1 TON	YALE	N/A	MACH SHOP	JIB CRANES/PWR	
305053	T	C	EB 222	822	JIB CRANE ELECT 1 TON	YALE	N/A	MACH SHOP	JIB CRANES/PWR	
305054	T	C	EB 222	822	JIB CRANE ELECT 1 TON	YALE	N/A	MACH SHOP	JIB CRANES/PWR	
305055	T	C	EB 222	822	JIB CRANE ELECT 1 TON	YALE	N/A	MACH SHOP	JIB CRANES/PWR	
305056	T	C	EB 222	822	JIB CRANE ELECT .5 TON	YALE/BUDGET	EL58	MACH SHOP	JIB CRANES/PWR	
305057	T	C	EB 274	405	JIB CRANE ELECT 1 TON	COFFING HOIST CO	N/A	#10A WHSE	JIB CRANES/PWR	
305058	T	C	EB 274	405	JIB CRANE ELECT 1 TON	COFFING HOIST CO	N/A	#10A WHSE	JIB CRANES/PWR	
305059	T	C	EB 235	813	ELECT WALL MTD 1 TON	YALE	EL90	FAB SHOP	JIB CRANES/PWR	
305060	T	C	EB 235	813	ELECT WALL MTD 2 TON	YALE	EL89	FAB SHOP	JIB CRANES/PWR	IIPDR
305061	T	C	WB 104	813	ELECT WALL MTD 5 TON	N/A	EL81	FAB SHOP	JIB CRANES/PWR	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3305062	T	C EB	235	813	ELECT PEDESTAL 3 TON	YALE	EL82	FAB SHOP	JIB CRANES/PWR	IIPDR
3305063	T	C WB	104	813	ELECT WALL MTD 1 TON	YALE	N/A	FAB SHOP	JIB CRANES/PWR	
3305064	T	C EB	235	813	ELECT PEDESTAL 3 TON	YALE	EL86	FAB SHOP	JIB CRANES/PWR	IIPDR
3305065	T	C WB	104	813	ELECT PEDESTAL 3 TON	YALE	EL88	FAB SHOP	JIB CRANES/PWR	
3305066	T	C EB	283	811	ELECT WALL MTD 3 TON	YALE	N/A	#9 PLATEN	JIB CRANES/PWR	
3305067	X	C WB	0	0	UNASSINGED	N/A	N/A	BOTH EB/WB YD	JIB CRANES/PWR	
3305068	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305069	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305070	T	C WB	191	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	PIPE-COMB SHOP	JIB CRANES/PWR	
3305071	T	C WB	191	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	PIPE-COMB SHOP	JIB CRANES/PWR	
3305072	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305073	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305074	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305075	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305076	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305077	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305078	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305080	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7589	BLDG & AREA -WB	JIB CRANES/PWR	
3305081	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305082	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305083	T	C WB	191	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	PIPE-COMB SHOP	JIB CRANES/PWR	
3305084	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305085	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305086	T	C WB	191	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305087	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305088	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305089	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305090	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305091	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305092	T	C WB	100	602	JIB CRANE ELECT 1 TON	ABELL HOWE CO.	77B7580	BLDG & AREA -WB	JIB CRANES/PWR	
3305093	T	C WB	128	405	JIB CRANE	ABELL HOWE CO.	77B8687	COMBINE SHOP	JIB CRANES/PWR	
3305094	T	C EB	275	430	JIB BOOM 3000#	ABELL HOWE CO.	N/A	#11 WHSE	JIB CRANES/PWR	
3305095	T	C EB	222	822	1 TON ELECT HOIST J/B	YALE/BUDGET	168191	MACH SHOP	JIB CRANES/PWR	
3305096	X	C WB	104	602	JIB W/ HOIST 3 TON	YALE	74B4602	FAB SHOP	JIB CRANES/PWR	
3305097	T	C EB	222	822	JIB CRANE W/1 TON HOIST	BRDGET	N/A	MACH SHOP	JIB CRANES/PWR	
3305098	T	C EB	222	822	JIB CRANE W/1 TON HOIST	BRDGET	N/A	MACH SHOP	JIB CRANES/PWR	
3305100	T	C WB	191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305101	T	C WB	191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305102	T	C WB	191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305103	T	C WB	191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305104	T	C WB	191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305105	T	C WB	191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305106	T	C WB	191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305107	T	C WB	191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305108	T	C WB	191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305109	T	C WB	191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305110	T	C WB	191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305111	T	C WB	191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305112	T	C WB	191	831	JIB CRANE ELECT 1 TON	P&H 1A1	82-700	PIPE-COMB SHOP	JIB CRANES/PWR	

SSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3305113	T	C	WB 191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305114	T	C	WB 191	831	JIB CRANE ELECT 1 TON	P&H 1A1	820700	PIPE-COMB SHOP	JIB CRANES/PWR	
3305115	T	C	EB 235	890	2 TON ELECT WALL MTD P	YALE 606P	882-AK1	FAB SHOP	JIB CRANES/PWR	
3305116	T	C	EB 235	890	3 TON ELECT PEDESTAL P	DETROIT HOIST &	J-26-2	FAB SHOP	JIB CRANES/PWR	
3305117	T	C	EB 235	890	3 TON ELECT PEDESTAL P	DETROIT HOIST &	J26-3	FAB SHOP	JIB CRANES/PWR	
3305118	T	C	EB 235	890	.5 TON JIB (NO HOIST) P	YALE	N/A	FAB SHOP	JIB CRANES/PWR	
3305119	T	C	EB 235	890	1 TON JIB (NO HOIST) P	YALE	N/A	FAB SHOP	JIB CRANES/PWR	
3305120	T	C	EB 240	890	1 OTN ELECT WADD MTD P	YALE BUDGET/P&H	610849	PIPE SHOP	JIB CRANES/PWR	
3305121	T	C	EB 240	890	.5 TON ELECT WALL MTD P	YALE BUDGET/P&H	610848	PIPE SHOP	JIB CRANES/PWR	
3305122	T	C	EB 240	890	1 TON ELECT WALL MTD P	YALE BUDGET/P&H	610852	PIPE SHOP	JIB CRANES/PWR	
3305123	T	C	EB 240	890	1 TON ELECT WALL MTD P	YALE BUDGET/P&H	610851	PIPE SHOP	JIB CRANES/PWR	
3305124	T	C	EB 240	890	.5 TON ELECT WALL MTD P	YALE BUDGET/P&H	610850	PIPE SHOP	JIB CRANES/PWR	
3305125	T	C	EB 240	890	1 TON ELECT WALL MTD P	YALE BUDGET/P&H	610855	PIPE SHOP	JIB CRANES/PWR	
3305127	T	C	WB 100	602	JIB CRANE	N/A PENDING INFO	N/A	MAIBLDG & AREA -WB	JIB CRANE, ELECT.	
3305128	T	C	WB 104	813	15'JIB (HOIST 3311-047	HANDLING SYS	840991	FAB SHOP	JIB CRANE, ELECT.	
3305129	T	C	WB 104	813	18'JIB (HOIST 3311-046	HANDLING SYS	840991	FAB SHOP	JIB CRANE, ELECT.	
3305130	T	C	WB 131	601	18'-1 (HOIST 3311-049	YALE*351-H	N/A	PLANT ENGR BLDG	JIB CRANE, ELECT.	
3305137	T	C	WB 191	831	JIB CRANE, .5 TON ELECT	DESHAZO*1,000#	4605-4	PIPE-COMB SHOP	JIB CRANE, ELECT.	
3305138	T	C	WB 191	831	JIB CRANE, .5 TON ELECT	DESHAZO*1,000#	4605-5	PIPE-COMB SHOP	JIB CRANE, ELECT.	
3305139	T	C	WB 191	831	JIB CRANE, .5 TON ELECT	DESHAZO*1,000#	4605-6	PIPE-COMB SHOP	JIB CRANE, ELECT.	
3305140	T	C	WB 191	831	JIB CRANE, .5 TON ELECT	DESHAZO*1,000#	4605-7	PIPE-COMB SHOP	JIB CRANE, ELECT.	
3305141	T	C	WB 191	831	JIB CRANE, .5 TON ELECT	DESHAZO*1,000#	4605-8	PIPE-COMB SHOP	JIB CRANE, ELECT.	
3305142	T	C	WB 191	831	JIB CRANE, .5 TON ELECT	DESHAZO*1,000#	4605-9	PIPE-COMB SHOP	JIB CRANE, ELECT.	
3305143	T	C	WB 191	831	JIB CRANE, .5 TON ELECT	DESHAZO*1,000#	4605-1	PIPE-COMB SHOP	JIB CRANE, ELECT.	
3305144	T	C	WB 191	831	JIB CRANE, .5 TON ELECT	DESHAZO*1,000#	4605-2	PIPE-COMB SHOP	JIB CRANE, ELECT.	
3305145	T	C	WB 191	831	JIB CRANE, .5 TON ELECT	DESHAZO*1,000#	4605-3	PIPE-COMB SHOP	JIB CRANE, ELECT.	
3305146	T	C	WB 104	813	2 TON ELECT WALL MTD	GORBEL	G2808	FAB SHOP	JIB CRANE, ELECT.	
3305147	T	C	WB 104	813	2 TON ELECT WALL MTD	GORBEL	G2808	FAB SHOP	JIB CRANE, ELECT.	
3306001	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EB/WB YD	JIB CRANE	
3306002	T	C	WB 191	827	JIB CRANE CHAIN 1 TON	ABELL HOWE CO.	73-B-40	PIPE-COMB SHOP	JIB CRANE	
3306003	T	C	WB 128	827	JIB CRANE CHAIN 1 TON	ABELL HOWE CO.	73B4046	COMBINE SHOP	JIB CRANE	
3306004	T	C	WB 191	827	JIB CRANE CHAIN	ABELL HOWE CO.	73B4046	PIPE-COMB SHOP	JIB CRANE	
3306005	T	C	WB 191	827	JIB CRANE CHAIN	ABELL HOWE CO.	COMB.PI	PIPE-COMB SHOP	JIB CRANE	2879R
3306006	T	C	WB 131	602	JIB CRANE CHAIN 1 TON	YALE/BUDGET	N/A	MAINT/FACIL BLD	JIB CRANE	
3306007	T	C	WB 131	602	JIB CRANE CHAIN 2 TON	YALE/BUDGET	N/A	MAINT/FACIL BLD	JIB CRANE	
3306008	T	C	WB 131	602	JIB CRANE CHAIN 2 TON	YALE/BUDGET	N/A	MAINT/FACIL BLD	JIB CRANE	
3306009	T	C	WB 131	602	JIB CRANE CHAIN 2 TON	N/A	N/A	MAINT/FACIL BLD	JIB CRANE	
3306010	T	C	WB 131	602	JIB CRANE CHAIN 1 TON	N/A	N/A	MAINT/FACIL BLD	JIB CRANE	
3306011	T	C	WB 131	602	JIB CRANE CHAIN .5 TON	YALE	N/A	MAINT/FACIL BLD	JIB CRANE	
3306012	T	C	WB 131	602	JIB CRANE CHAIN 1 TON	ABELL HOWE CO.	N/A	MAINT/FACIL BLD	JIB CRANE	
3306013	T	C	WB 128	827	JIB CRANE CHAIN 1 TON	YALE	N/A	COMBINE SHOP	JIB CRANE	
3306014	T	C	WB 128	827	JIB CRANE CHAIN 1 TON	YALE/BUDGET	N/A	COMBINE SHOP	JIB CRANE	
3306015	T	C	WB 128	827	JIB CRANE CHAIN 1 TON	YALE/BUDGET	N/A	COMBINE SHOP	JIB CRANE	
3306016	T	C	WB 128	827	JIB CRANE CHAIN 1 TON	YALE/BUDGET	N/A	COMBINE SHOP	JIB CRANE	
3306017	T	C	WB 128	827	JIB CRANE CHAIN 1 TON	YALE	016	COMBINE SHOP	JIB CRANE	
3306018	T	C	WB 128	827	JIB CRANE CHAIN 1 TON	YALE	015	COMBINE SHOP	JIB CRANE	
3306019	T	C	EB 221	822	JIB CRANE CHAIN 1 TON	YALE	N/A	MACH ASSY	JIB CRANE	
3306020	T	C	EB 221	822	JIB CRANE CHAIN 1 TON	YALE	N/A	MACH ASSY	JIB CRANE	
3306021	T	C	EB 221	822	JIB CRANE CHAIN	YALE	N/A	MACH ASSY	JIB CRANE	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3306022	T	C	EB 222	822	JIB CRANE CHAIN 1 TON	YALE	N/A	MACH SHOP	JIB CRANE	
3306023	T	C	EB 227	822	JIB CRANE CHAIN 1.5 TON	YALE	N/A	MAINT-DEP/E-SHP	JIB CRANE	
3306024	T	C	EB 227	831	JIB CRANE CHAIN 1.5 TON	YALE	N/A	MAINT-DEP/E-SHP	JIB CRANE	
3306025	T	C	EB 240	831	JIB CRANE CHAIN .5 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306026	T	C	EB 240	831	JIB CRANE CHAIN .5 TON	YALE/BUDGET	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306027	T	C	EB 240	831	JIB CRANE CHAIN 1 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306028	T	C	EB 240	831	JIB CRANE CHAIN .5 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306029	T	C	EB 240	831	JIB CRANE CHAIN .5 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306030	T	C	EB 240	831	JIB CRANE CHAIN .5 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306031	T	C	EB 240	831	JIB CRANE CHAIN .5 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306032	T	C	EB 240	831	JIB CRANE CHAIN .5 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306033	T	C	EB 240	831	JIB CRANE CHAIN 1 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306034	T	C	EB 240	831	JIB CRANE CHAIN 1 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306035	T	C	EB 240	831	JIB CRANE CHAIN .5 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306036	T	C	EB 240	831	JIB CRANE CHAIN .5 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306037	T	C	EB 240	831	JIB CRANE CHAIN 1 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306038	T	C	EB 240	831	JIB CRANE CHAIN 1 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306039	T	C	EB 240	831	JIB CRANE CHAIN 1 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306040	T	C	EB 240	831	JIB CRANE CHAIN 1 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306041	T	C	EB 240	831	JIB CRANE CHAIN 1 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306042	T	C	EB 240	831	JIB CRANE CHAIN .5 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306043	T	C	EB 240	831	JIB CRANE CHAIN .5 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306044	T	C	EB 240	831	JIB CRANE CHAIN .5 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306045	T	C	EB 240	831	JIB CRANE CHAIN .5 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306046	T	C	EB 240	831	JIB CRANE CHAIN 1 TON	YALE	N/A	PIPE SHOP	JIB CRANE	IIPDR
3306047	T	C	EB 277	405	JIB CRANE CHAIN 2 TON	CYCLONE	N/A	#12A WHSE	JIB CRANE	
3306048	T	C	EB 238	602	JIB CRANE CHAIN 3 TON	WRIGHT	N/A	LEAD SHOP	JIB CRANE	
3306049	T	C	EB 231	825	JIB CRANE CHAIN 1 TON	YALE	N/A	SHEETMTL SHOP	JIB CRANE	IIPDR
3306050	T	C	WB 131	825	JIB CRANE CHAIN 1 TON	YALE	N/A	MAINT/FACIL BLD	JIB CRANE	IIPDR
3306051	T	C	EB 231	825	JIB CRANE CHAIN 1 TON	YALE	N/A	SHEETMTL SHOP	JIB CRANE	IIPDR
3306052	T	C	EB 231	825	JIB CRANE CHAIN 1 TON	YALE	N/A	SHEETMTL SHOP	JIB CRANE	IIPDR
3306053	T	C	EB 231	825	JIB CRANE CHAIN 1 TON	YALE	N/A	SHEETMTL SHOP	JIB CRANE	IIPDR
3306054	T	C	EB 231	825	JIB CRANE CHAIN 1.5 TON	YALE	N/A	SHEETMTL SHOP	JIB CRANE	IIPDRR
3306055	T	C	EB 223	602	CHAIN PEDESTAL CRANE	YALE	CF-66	X-RAY LAB	JIB CRANE	
3306056	T	C	EB 235	813	CHAIN WALL MTD 1 TON	YALE	CF-85	FAB SHOP	JIB CRANE	IIPDR
3306057	T	C	WB 128	827	JIB CRANE CHAIN 0.5 TON	YALE KELI/210L30	P9/76	COMBINE SHOP	JIB CRANE	
3306058	T	C	WB 128	827	JIB CRANE CHAIN 0.5 TON	YALE KELI/210L30	P9/76	XOMBINE SHOP	JIB CRANE	
3306059	T	C	WB 130	851	JIB CRANE CHAIN 0.5 TON	ABELL HOWE CO.	MC-76	BALUM FAB SHOP	JIB CRANE	
3306060	T	C	EB 240	890	1 TON (NO HOIST)	YALE	N/A	PIPE SHOP	JIB CRANE	
3306061	T	C	EB 240	890	1 TON (NO HOIST)	YALE	N/A	PIPE SHOP	JIB CRANE	
3306062	T	C	EB 240	890	0.5 TON (NO HOIST)	YALE/BUDGET	N/A	PIPE SHOP	JIB CRANE	
3306063	T	C	EB 240	890	0.5 TON (NO HOIST)	YALE/BUDGET	N/A	PIPE SHOP	JIB CRANE	
3306064	T	C	EB 240	890	1 TON (NO HOIST)	YALE/BUDGET	N/A	PIPE SHOP	JIB CRANE	
3306065	T	C	EB 240	890	1 TON (NO HOIST)	YALE/BUDGET	N/A	PIPE SHOP	JIB CRANE	
3306066	T	C	EB 240	890	1 TON (NO HOIST)	YALE BUDGET SP	N/A	PIPE SHOP	JIB CRANE	
3306067	T	C	EB 240	890	1 TON (NO HOIST)	YALE BUDGET SP	N/A	PIPE SHOP	JIB CRANE	
3306068	T	C	EB 240	890	0.5 TON (NO HOIST)	YALE BUDGET SP	N/A	PIPE SHOP	JIB CRANE	
3306069	T	C	EB 231	890	0.5 TON (NO HOIST)	YALE/BUDGET	N/A	SHEETMTL SHOP	JIB CRANE	
3306070	T	C	EB 231	890	1 TON (NO HOIST)	YALE/BUDGET	N/A	SHEETMTL SHOP	JIB CRANE	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3306071	T	C	EB 231	890	1 TON (NO HOIST)	YALE/BUDGET	N/A	SHEETMTL SHOP	JIB CRANE	
3306072	T	C	EB 231	890	1 TON (NO HOIST)	YALE/BUDGET	N/A	SHEETMTL SHOP	JIB CRANE	
3306073	T	C	EB 231	890	1 TON (NO HOIST)	YALE/BUDGET	N/A	SHEETMTL SHOP	JIB CRANE	
3306074	T	C	EB 240	890	0.5 TON (NO HOIST)	YALE	N/A	PIPE SHOP	JIB CRANE	
3306075	T	C	EB 240	890	0.5 TON (NO HOIST)	YALE	N/A	PIPE SHOP	JIB CRANE	
3306076	T	C	EB 240	890	0.5 TON (NO HOIST)	YALE	N/A	PIPE SHOP	JIB CRANE	
3306077	T	C	EB 240	890	0.5 TON (NO HOIST)	YALE	N/A	PIPE SHOP	JIB CRANE	
3306078	T	C	EB 240	890	0.5 TON (NO HOIST)	YALE	N/A	PIPE SHOP	JIB CRANE	
3306079	T	C	EB 240	890	0.5 TON (NO HOIST)	YALE	N/A	PIPE SHOP	JIB CRANE	
3306088	T	C	EB 231	890	1.5 TON (NO HOIST)	YALE	N/A	SHEETMTL SHOP	JIB CRANE	
3306089	T	C	EB 235	890	1 TON WALL MTD	YALE SP	N/A	FAB SHOP	JIB CRANE	
3306090	T	C	EB 235	890	1 TON WALL MTD	YALE	N/A	FAB SHOP	JIB CRANE	
3306091	T	C	EB 231	890	0.5 TON WALL MTD (N/H)	YALE	N/A	SHEETMTL SHOP	JIB CRANE	
3306092	T	C	EB 231	890	0.5 TON WALL MTD (N/H)	YALE	N/A	SHEETMTL SHOP	JIB CRANE	
3306093	T	C	EB 231	890	1 TON WALL MTD (N/H)	YALE	N/A	SHEETMTL SHOP	JIB CRANE	
3306094	T	C	WB 191	831	2 TON WALL MOUNTED	ABELL HOWE*J900	N/A	PIPE-COMB SHOP	JIB CRANE, MANUAL	
3307001	T	C	WB 100	602	CAT GEN COLL CHG NO	N/A(INCLUDE CAT	N/A	BLDG & AREA -WB	MONO RAILS/POWER	
3307002	X	C	EB 215	602	MONORAIL ELECT. 2 TON N	YALE	N/A	GALV/TEF BLDG.	MONO RAILS/POWER	
3307003	X	C	EB 215	602	MONORAIL PNUEMATIC	N/A	N/A	GALV/TEF BLDG.	MONO RAILS/POWER	
3307004	X	C	WB 0	0	UNASSIGNED	N/A	N/A	BOTH EB/WB YD	MONO RAILS/POWER	
3307005	X	C	WB 131	602	MONORAIL CRANE ELECT	ROBINS & MEYERS	N/A	MAINT/FACIL BLD	MONO RAILS/POWER	3004R
3307006	X	C	WB 141	602	MONORAIL ELECT 1 TON	WRIGHT	N/A	TOOL STORAGE	MONO RAILS/POWER	
3307007	X	C	WB 104	602	N/A	N/A	N/A	FAB SHOP	MONO RAILS/POWER	3004R
3307008	X	C	EB 222	602	MONORAIL ELECT 3 TON	P & H	N/A	MACH SHOP	MONO RAILS/POWER	
3307009	X	C	EB 221	602	MONORAIL ELECT 5 TON	P & H	N/A	MACH ASSY	MONO RAILS/POWER	
3307010	X	C	EB 221	602	MONORAIL ELECT 5 TON	ROBINS & MEYERS	15002VR	MACH ASSY	MONO RAILS/POWER	
3307011	X	C	EB 227	602	MONORAIL ELECT 0.5 TON	YALE/FUDGET	N/A	MAINT DEP/E SHP	MONO RAILS/POWER	
3307012	X	C	EB 227	602	MONORAIL ELECT 5 TON	N/A	EL23	MAINT DEP/E SHP	MONO RAILS/POWER	3004R
3307013	X	C	EB 236	843	MONORAIL ELECT 2 TON	ROBINS & MEYERS	N/A	ELEC SHOP	MONO RAILS/POWER	
3307014	X	C	EB 236	843	MONORAIL ELECT 2 TON	ROBINS & MEYERS	27682	ELEC SHOP	MONO RAILS/POWER	
3307015	X	C	EB 227	602	MONORAIL ELECT 5 TON	ROBINS & MEYERS	EL19	MAINT DEP/E SHP	MONO RAILS/POWER	
3307016	X	C	EB 240	831	MONORAIL ELECT 3 TON	YALE	N/A	PIPE SHOP	MONO RAILS/POWER	
3307017	X	C	EB 240	831	MONORAIL ELECT 3 TON	YALE	EL12	PIPE SHOP	MONO RAILS/POWER	
3307018	X	C	EB 240	831	MONORAIL ELECT 1 TON	YALE	EL17	PIPE SHOP	MONO RAILS/POWER	
3307019	X	C	EB 248	430	MONORAIL ELECT 3 TON	P & H	N/A	SUB-OVERHL BLDG	MONO RAILS/POWER	
3307020	X	C	EB 277	601	MONORAIL ELECT 3 TON	WRIGHT WUG	N/A	#12A WHSE	MONO RAILS/POWER	
3307021	X	C	EB 277	601	MONORAIL ELEC 1.5 TON	YALE	N/A	#12A WHSE	MONO RAILS/POWER	
3307022	X	C	EB 276	405	MONORAIL ELECT 1 TON	ROBBINS & MEYERS	H25/74	#12 WHSE	MONO RAILS/POWER	
3307023	X	C	EB 276	405	MONORAIL ELECT 2 TON	WRIGHT	N/A	#12 WHSE	MONO RAILS/POWER	
3307024	X	C	EB 276	405	MONORAIL ELECT 2 TON	WRIGHT	N/A	#12 WHSE	MONO RAILS/POWER	
3307025	X	C	EB 275	430	MONORAIL ELECT 2 TON	YALE	N/A	#11 WHSE	MONO RAILS/POWER	
3307026	X	C	EB 275	430	MONORAIL ELECT 1 TON	YALE/BUDGET	N/A	#11 WHSE	MONO RAILS/POWER	
3307027	X	C	EB 275	430	MONORAIL ELECT 1 TON	YALE/BUDGET	N/A	#11 WHSE	MONO RAILS/POWER	
3307028	X	C	EB 273	430	MONORAIL ELECT 1 TON	ROBBINS & MEYERS	N/A	#10 WHSE	MONO RAILS/POWER	
3307029	X	C	EB 246	815	MONORAIL PNEUMATIC	N/A	AH-6	OUT CRAFTS BLDG	MONO RAILS/POWER	
3307030	X	C	EB 272	405	MONORAIL ELECT 1 TON	PEERLESS	N/A	4,4A,5&6 WHSE	MONO RAILS/POWER	
3307031	X	C	WB 104	405	MONORAIL ELEC 0.5 TON	YALE	EL-94	FAB SHOP	MONO RAILS/POWER	
3307032	X	C	EB 221	822	MONORAIL ELECT 2 TON	YALE	N/A	MACH ASSY	MONO RAILS/POWER	
3307033	X	C	EB 218	602	MONORAIL PNEUMATIC	YALE	567888	MAINT, GARAGE	MONO RAILS/POWER	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3307034	X	C EB	250	601	MONORAIL ELECT 1 TON	P & H 33	602752	SORB	MONO RAILS/POWER	
3307035	X	C EB	250	601	MONORAIL ELECT 1 TON	WRIGHT	E32608	SORB	MONO RAILS/POWER	
3307036	X	C EB	250	601	MONORAIL ELECT 1 TON	WRIGHT	E32609	SORB	MONO RAILS/POWER	
3307037	X	C WB	128	827	MONORAIL ELET 7 000000	ROBBINS & MEYERS	45898V0	COMBINE SHOP	MONO RAILS/POWER	
3307038	X	C WB	128	827	MONORAIL ELECT 3 TON	COFFING HOIST	COUGS2053	COMBINE SHOP	MONO RAILS/POWER	
3307039	X	C EB	277	601	HOIST WIRE ROPE 2 TON	YALE	AW217987	N/A #12A WHSE	MONO RAILS/POWER	
3307040	X	C EB	236	843	HOIST 2 TON	WRIGHT	2008 27	ELEC SHOP	MONO RAILS/POWER	
3307041	X	C EB	274	405	MONORAIL ELECT 5 TON	INDUSTRIAL CRANE	274 EL4	#10 A WHSE	MONO RAILS/POWER	
3307042	X	C EB	275	405	MONORAIL ELECT 1 TON	YALE/BUDGET	EL 33	#11 WHSE	MONO RAILS/POWER	
3307043	X	C EB	275	405	MONORAIL ELECT 1 TON	YALE/BUDGET	EL 11	#11 WHSE	MONO RAILS/POWER	
3307044	X	C WB	104	430	ELECTRIC HOIST 1 TON	YALE	FBIE56WT21	N/A FAB SHOP	MONO RAILS/POWER	
3307045	X	C EB	215	807	MONORAIL ELECT 2 TON	COFFING	WDMT-45 782-3-GGALV	TEF BLDG.	MONO RAILS/POWER	
3307046	X	C EB	213	602	MONORAIL POWER 3 TON	YALE	N/A	SAND BLAST FAC	MONO RAILS/POWER	
3307047	T	C WB	2	601	MONORAIL ELECT 2 TON	P&H	MOD.4A214-4 611053	WELDING LAB	MONO RAILS/POWER	
3307048	X	C WB	192	825	MONORAIL ELECT 5 TON	ROBBINS & MEYERS	44808MF	SHEEMTL-COMB SH	MONO RAILS/POWER	
3307049	X	C EB	238	890	0.5 TON AIR HOIST	BUDGET	311562-16903911	LEAD SHOP	MONO RAILS/POWER	
3307050	T	C WB	130	851	MONORAIL ELECT 0.5 TON	ACCO	BB5	ALUM FAB SHOP	MONO RAIL, ELECT	
3307051	T	C WB	130	851	MONORAIL ELECT 0.5 TON	ACCO	BB8	ALUM FAB SHOP	MONO RAIL, ELECT	
3307052	T	C WB	130	851	MONORAIL ELECT 0.5 TON	ACCO	BC9	ALUM FAB SHOP	MONO RAIL, ELECT	
3307053	T	C WB	130	851	MONORAIL ELECT 0.5 TON	ACCO	BC10	ALUM FAB SHOP	MONO RAIL, ELECT	
3308001	T	C EB	213	822	MONORAIL CHAIN 3 TON	YALE	N/A	SAND BLAST FAC	MONO RAILS/CHAIN	
3308002	X	C EB	216	809	MONORAIL CHAIN	YALE	N/A	WELDING SCH.	MONO RAILS/CHAIN	
3308003	X	C EB	218	602	MONORAIL CHAIN 1 TON	YALE	N/A	MAINT. GARAGE	MONO RAILS/CHAIN	
3308004	X	C EB	218	602	MONORAIL CHAIN 0.5 TON	YALE	N/A	MAINT. GARAGE	MONO RAILS/CHAIN	
3308005	X	C WB	0	0	UNASSIGNED	N/A	N/A	BOTH EB/WB YD	MONO RAILS/CHAIN	
3308006	X	C EB	221	822	MONORAIL CHAIN	YALE/BUDGET	N/A	MACH ASSY	MONO RAILS/CHAIN	
3308007	X	C EB	221	822	MONORAIL CHAIN 2 TON	P&H	N/A	MACH ASSY	MONO RAILS/CHAIN	
3308008	X	C EB	221	822	MONORAIL CHAIN 1 TON	YALE	N/A	MACH ASSY	MONO RAILS/CHAIN	
3308009	X	C EB	221	822	MONORAIL CHAIN 1 TON	YALE	N/A	MACH ASSY	MONO RAILS/CHAIN	
3308010	X	C EB	221	822	MONORAIL CHAIN 2 TON	P&H	N/A	MACH ASSY	MONO RAILS/CHAIN	
3308011	X	C EB	221	822	MONORAIL CHAIN 2 TON	YALE	N/A	MACH ASSY	MONO RAILS/CHAIN	
3308012	X	C EB	221	822	MONORAIL CHAIN 2 TON	P&H	N/A	MACH ASSY	MONO RAILS/CHAIN	
3308013	X	C EB	221	822	MONORAIL CHAIN 2 TON	P&H	N/A	MACH ASSY	MONO RAILS/CHAIN	
3308014	X	C EB	221	822	MONORAIL CHAIN 1.5 TON	YALE	N/A	MACH ASSY	MONO RAILS/CHAIN	
3308015	X	C EB	221	822	MONORAIL CHAIN 1 TON	YALE	N/A	MACH ASSY	MONO RAILS/CHAIN	
3308016	X	C EB	221	822	MONORAIL CHAIN 3 TON	P&H	N/A	MACH ASSY	MONO RAILS/CHAIN	
3308017	X	C EB	221	822	MONORAIL CHAIN 1.5 TON	YALE	N/A	MACH ASSY	MONO RAILS/CHAIN	
3308018	X	C EB	221	822	MONORAIL CHAIN 2 TON	P&H	N/A	MACH ASSY	MONO RAILS/CHAIN	
3308019	X	C EB	222	822	MONORAIL CHAIN 1.5 TON	WRIGHT	N/A	MACH SHOP	MONO RAILS/CHAIN	
3308020	X	C EB	222	822	MONORAIL CHAIN 3 TON	YALE	N/A	MACH SHOP	MONO RAILS/CHAIN	
3308021	X	C EB	222	822	MONORAIL CHAIN 1.5 TON	SHAW BOX	N/A	MACH SHOP	MONO RAILS/CHAIN	
3308022	X	C EB	222	822	MONORAIL CHAIN 2 TON	YALE	N/A	MACH SHOP	MONO RAILS/CHAIN	
3308023	X	C EB	222	822	MONORAIL CHAIN 1 TON	YALE	N/A	MACH SHOP	MONO RAILS/CHAIN	
3308024	X	C EB	222	822	MONORAIL CHAIN 1.5 TON	SHAW BOX	N/A	MACH SHOP	MONO RAILS/CHAIN	
3308025	X	C EB	222	822	MONORAIL CHAIN 1.5 TON	YALE	N/A	MACH SHOP	MONO RAILS/CHAIN	
3308026	X	C EB	222	822	MONORAIL CHAIN 1 TON	YALE	N/A	MACH SHOP	MONO RAILS/CHAIN	
3308027	X	C EB	227	822	MONORAIL CHAIN 1 TON	YALE	N/A	MAINT DEP/E SHP	MONO RAILS/CHAIN	
3308028	X	C EB	227	602	MONORAIL CHAIN 1 TON	YALE	N/A	MAINT DEP/E SHP	MONO RAILS/CHAIN	
3308029	X	C EB	227	602	MONORAIL CHAIN 0.5 TON	YALE/BUDGET	N/A	MAINT DEP/E SHP	MONO RAILS/CHAIN	

SSET UMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3308030	X	C EB	227	602	MONORAIL CHAIN 0.5 TON	YALE	N/A	MAINT DEP/E SHP	MONO RAILS/CHAIN	
3308031	X	C EB	227	602	MONORAIL CHAIN 5 TON	YALE	N/A	MAINT DEP/E SHP	MONO RAILS/CHAIN	
3308032	X	C EB	236	602	MONORAIL CHAIN 1 TON	YALE/BUDGET	N/A	ELEC SHOP	MONO RAILS/CHAIN	
3308033	X	C EB	236	843	MONORAIL CHAIN 5 TON	YALE	N/A	ELEC SHOP	MONO RAILS/CHAIN	
3308034	X	C EB	236	843	MONORAIL CHAIN 2 TON	YALE	N/A	ELEC SHOP	MONO RAILS/CHAIN	
3308035	X	C EB	240	843	MONORAIL CHAIN 0.5 TON	YALE	N/A	PIPE SHOP	MONO RAILS/CHAIN	
3308036	X	C EB	241	831	MONORAIL CHAIN 1 TON	YALE	N/A	PIPE X-RAY	MONO RAILS/CHAIN	
3308037	X	C EB	241	831	MONORAIL CHAIN 1 TON	YALE	N/A	PIPE X-RAY	MONO RAILS/CHAIN	
3308038	X	C EB	241	831	MONORAIL CHAIN 1 TON	YALE	N/A	PIPE X-RAY	MONO RAILS/CHAIN	
3308039	X	C EB	240	831	MONORAIL CHAIN 2 TON	YALE	N/A	PIPE SHOP	MONO RAILS/CHAIN	
3308040	X	C EB	240	831	MONORAIL CHAIN 2 TON	YALE	N/A	PIPE SHOP	MONO RAILS/CHAIN	
3308041	X	C EB	240	831	MONORAIL CHAIN 1.5 TON	YALE	N/A	PIPE SHOP	MONO RAILS/CHAIN	
3308042	X	C EB	240	831	MONORAIL CHAIN 1 TON	YALE	N/A	PIPE SHOP	MONO RAILS/CHAIN	
3308043	X	C EB	240	831	MONORAIL CHAIN 2 TON	YALE	N/A	PIPE SHOP	MONO RAILS/CHAIN	
3308044	X	C EB	240	831	MONORAIL CHAIN 10 TON	YALE/BUDGET	N/A	PIPE SHOP	MONO RAILS/CHAIN	
3308045	X	C EB	240	831	MONORAIL CHAIN 1.5 TON	YALE	N/A	PIPE SHOP	MONO RAILS/CHAIN	
3308046	X	C EB	240	831	MONORAIL CHAIN 2 TON	YALE	N/A	PIPE SHOP	MONO RAILS/CHAIN	
3308047	X	C EB	240	831	MONORAIL CHAIN 1 TON	YALE/BUDGET	CH1	PIPE SHOP	MONO RAILS/CHAIN	
3308048	X	C EB	240	601	MONORAIL CHAIN 2 TON	CYCLONE	N/A	PIPE SHOP	MONO RAILS/CHAIN	
3308049	X	C EB	277	601	MONORAIL CHAIN 1 TON	YALE	N/A	#12A WHSE	MONO RAILS/CHAIN	
3308050	X	C EB	244	602	MONORAIL CHAIN 0.5 TON	YALE	N/A	MAINT ANX/STOR	MONO RAILS/CHAIN	
3308051	X	C EB	238	890	2 TON CHAIN	YALE	N/A	LEAD SHOP	MONO RAILS/CHAIN	
3309001	T	C WB	130	851	VACU LIFT 3 TON	ANVER CORP.	N/A	ALUM FAB SHOP	VACUUM LIFT	
3309002	T	C WB	130	851	VACU LIFT 3 TON	ANVER CORP.	N/A	ALUM FAB SHOP	VACUUM LIFT	
3309003	T	C WB	130	851	VACU LIFT	ANVER CORP.	N/A	ALUM FAB SHOP	VACUUM LIFT	
3309004	T	C WB	130	851	VACU LIFT	ANVER CORP.	N/A	ALUM FAB SHOP	VACUUM LIFT	
3310001	T	C WB	131	602	HYDR. CRANE 2 TON	RUGER STRATTON 6NXA	159	PLANT ENGR BLDG	PORTABLE CRANE	
3310002	T	E WB	131	602	HYDR. CRANE 1 TON	RUGER STRATTON 174G	154	PLANT ENGR BLDG	PORTABLE CRANE	
3310003	T	C WB	3	817	HYD CRANE 11/2 TON ELEC	AIR TECH RBC 300	34829	TRACK 1 NORTH	PORTABLE CRANE	
3310004	T	C EB	221	834	HYDR. CRANE 1 TON	HUSKY MASTER HM	35999	MACH ASSY	PORTABLE CRANE	
3310005	T	C EB	272	827	HYDR. CRANE TON	RUGER 55	LF266154,4A,5&6	WHSE	PORTABLE CRANE	
3310006	T	C EB	272	827	HYDR. CRANE TON	RUGER 55	LF266164,4A,5&6	WHSE	PORTABLE CRANE	
3310007	T	C EB	272	827	HYDR. CRANE TON	RUGER 55	LF266174,4A,5&6	WHSE	PORTABLE CRANE	
3310008	T	C EB	272	827	HYDR. CRANE TON	RUGER 55	LF266184,4A,5&6	WHSE	PORTABLE CRANE	
3310009	T	C EB	272	827	HYDR. CRANE TON	RUGER 55	LF266194,4A,5&6	WHSE	PORTABLE CRANE	
3310010	T	C EB	272	827	HYDR. CRANE TON	RUGER 55	LF266204,4A,5&6	WHSE	PORTABLE CRANE	
3310011	T	E EB	246	890	HYDRAULIC CRANE 0.5 TON	RUGER*HP-1/2R	79GS226	OUT CRAFTS BLDG	PORTABLE CRANE	
3311002	T	C EB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613815	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311003	T	C EB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613816	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311004	T	C EB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613817	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311005	T	C EB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613818	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311006	T	C EB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613819	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311007	T	C EB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613820	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311008	T	C EB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613821	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311009	T	C EB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613822	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311010	T	C EB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613823	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311011	T	C EB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613824	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311012	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613825	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311013	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613826	PIPE-COMB SHOP	HOIST/ELET&MANUAL	

ASSET NUMBER	TRK CEO	E/W	LOC CDE	C/C	EQUIP DESCRIPTION	MANUFACTURERS NAME	SERIAL NO.	LOCATION DESCRIPTION	CATEGORY DESCRIPTION	CARN
3311014	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613827	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311015	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613828	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311016	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613829	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311017	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613830	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311018	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613831	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311019	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613832	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311020	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613833	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311021	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613834	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311022	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613837	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311023	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613836	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311024	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613835	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311025	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613838	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311026	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613839	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311027	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613840	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311028	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613841	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311029	T	C WB	191	831	ELECT HOIST 1 TON	P & H MOD.1A1	613842	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311041	T	C WB	154	815	ELECT HOIST 1 TON	P&HHEVILIFT 2C	41614107	SUB ASSY BAY 1	HOIST/ELET&MANUAL	
3311042	T	C EB	246	890	ELECT HOIST 3 TON	CABLE KING 606P	AR-1400	OUT CRAFTS BLDG	HOIST/ELET&MANUAL	
3311043	T	C EB	224	807	ELECT HOIST 2 TON	P&H MOD. 2A2	61498	ANNEALIGN FURN	HOIST/ELET&MANUAL	
3311044	T	C WB	131	602	ELECT HOIST 2 TON	YALE KEL2-12R	155109938	-PLANT ENGR BLDG	HOIST/ELET&MANUAL	
3311045	T	E WB	131	602	ELECT HOIST 2 TON	BEEBE L3D2CLS	0757-10	PLANT ENGR BLDG	HOIST/ELET&MANUAL	
3311046	T	E WB	104	813	ELECT HOIST 1 TON	ROBBINS & MYERS	148107P	FAB SHOP	HOIST/ELET&MANUAL	
3311047	T	C WB	104	813	ELECT HOIST 1 TON	ROBBINS & MYERS	148107P	FAB SHOP	HOIST/ELET&MANUAL	
3311048	T	C WB	158	815	ELECT HOIST 1 TON	P&HHEVILIFT 2C	41614305	SUB ASSY BAY 5	HOIST/ELET&MANUAL	
3311049	T	C WB	131	601	ELECT HOIST 2 TON	YALE*2-10LG15	191106	-PLANT ENGR BLDG	HOIST/ELET&MANUAL	
3311053	T	C WB	100	602	ELECT HOIST 2 TON	ABEL HOWE (S.SIDNA	(PENDBLDG & AREA	-WB	HOIST/ELET&MANUAL	
3311054	T	C WB	191	831	ELECT HOIST 2 TON	ROBBINS &MYERS	152451S	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311055	T	C WB	191	831	ELECT HOIST 1 TON	DUFF NORTON	N/A(MOD	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311056	T	C WB	191	831	ELECT HOIST 1 TON	DUFF NORTON	N/A(MOD	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311057	T	C WB	191	831	ELECT HOIST 1 TON	DUFF NORTON	N/A(MOD	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311058	T	C WB	191	831	ELECT HOIST 1 TON	DUFF NORTON	N/A(MOD	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311059	T	C WB	191	831	ELECT HOIST 1 TON	DUFF NORTON	N/A(MOD	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311060	T	C WB	191	831	ELECT HOIST 1 TON	DUFF NORTON	N/A(MOD	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311061	T	C WB	191	831	ELECT HOIST 1 TON	DUFF NORTON	N/A(MOD	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311062	T	C WB	191	831	ELECT HOIST 1 TON	DUFF NORTON	N/A(MOD	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311063	T	C WB	191	831	ELECT HOIST 1 TON	DUFF NORTON	N/A(MOD	PIPE-COMB SHOP	HOIST/ELET&MANUAL	
3311064	T	E WB	128	602	ELECT HOIST 2 TON	ROBBINS & MYERS	153636T	COMBINE SHOP	HOIST/ELET&MANUAL	
3311065	T	C EB	225	602	1 TON MONORAIL HOIST	ROBBINS & MYERS	152260S	WELD MACH REP	HOIST/ELET&MANUAL	
3311066	T	C WB	104	813	ELECT HOIST 1 TON	YALE*LELI-10RT15K-10385		FAB SHOP	HOIST/ELET&MANUAL	
3311067	T	C WB	104	813	ELECT HOIST 1 TON	YALE*LELI-10RT15K-10385		FAB SHOP	HOIST/ELET&MANUAL	
3311068	T	C WB	104	813	ELECT HOIST 2 TON	ROBBLI&MYERS	1218155015T	FAB SHOP	HOIST/ELET&MANUAL	
3311069	T	C WB	104	813	ELECT HOIST 2 TON	ROBBLI&MYERS	1218155015T	FAB SHOP	HOIST/ELET&MANUAL	

APPENDIX A2

MATERIAL HANDLING EQUIPMENT MANUFACTURING COMPANY LIST

MATERIAL HANDLING EQUIPMENT MANUFACTURING COMPANY LIST

Comp Code	Trucks Forklift	Trucks Platfm	Trucks Side Load	Trucks Rough Terrain	Crane Rails	Cranes Fixed Bridge	Cranes Jib	Cranes Locom	Cranes Mobile Crawler	Cranes Mobile Gantry	Cranes Mobile Industria Truck	Cranes Mobile Truck	Cranes Traveling Bridge	Cranes Traveling Gantry	Cranes Truck
1							y						y	y	
2						y				y			y		
3						y	y	y					y	y	
4										y					
5										y				y	
6										y					
7										y	y	y		y	y
8												y			
9						y	y						y	y	
10													y	y	
11					y										
12							y						y		
13					y	y							y		
14									y						
15					y										
16													y		
17												y			
18														y	
19						y				y			y		
20	Y	y													
21							y								
22	Y														
23							y			y			y	y	
24	Y		y												
25											y	y			
26		y													
27											y				
28	Y														
29									y			y			
30							y	y	y			y			
31							y			y					
32										y				y	
33	Y	y		y											
34	Y	y		y											
35								y	y	y	y	y		y	y
36	Y	y		y											
37	Y														
38	Y	y		y											
39	Y													y	
40															
41							y								
42							y								

MATERIAL HANDLING EQUIPMENT MANUFACTURING COMPANY LIST

Comp Code	Trucks Forklift	Trucks Platfm	Trucks Side Load	Trucks Rough Terrain	Crane Rails	Cranes Fixed Bridge	Cranes Jib	Cranes Locom	Cranes Mobile Crawler	Cranes Mobile Gantry	Cranes Mobile Industria Truck	Cranes Mobile Truck	Cranes Traveling Bridge	Cranes Traveling Gantry	Cranes Truck
43					y	y							y		
44	Y														
45					y		y								
46	Y														
47	Y	y		y											
48		y													
49													y		
50	Y														
51						y	y						y	y	
52						y							y	y	
53	Y			y											
54	Y														
55							y								
56						y				y			y	y	
57	Y	y									y				
58											y	y			y
59					y	y	y						y	y	
60							y								
61		y													
62	Y														
63	Y														
64						y	y	y	y		y	y	y		
65							y								
66						y	y							y	
67		y		y							y				
68	Y	y													
69									y		y	y			y
70						y	y						y	y	
71					y	y	y						y	y	
72		y		y											
73					y	y	y			y		y	y	y	
74					y	y				y			y	y	
75						y	y						y	y	
76						y	y			y			y	y	
77	Y														
78							y				y				
79	Y			y											
80												y			
81	Y	y													
82														y	
83	Y		y												
84	Y	y													

MATERIAL HANDLING EQUIPMENT MANUFACTURING COMPANY LIST

Comp Code		Trucks Forklift	Trucks Platfm	Trucks Side Load	Trucks Rough Terrain	Crane Rails	Cranes Fixed Bridge	Cranes Jib	Cranes Locom	Cranes Mobile Crawler	Cranes Mobile Gantry	Cranes Mobile Industria Truck	Cranes Mobile Truck	Cranes Traveling Bridge	Cranes Traveling Gantry	Cranes Truc
85	Y			y												
86					y											
87			y		y											
88						y	y	y						y		
89						y	y	y						y	y	
90														y		
91								y								
92	Y															
93							y	y						y	y	
94												y	y			y
95			y													
96	Y			y												
97	Y															
98			y													
99							y	y						y	y	
100	Y		y													
101	Y		y	y												
102	Y		y													
103							y	y						y	y	
104	Y		y		y											
105														y		
106	Y		y		y											
107	Y															
108	Y															
109							y	y			y			y	y	
110	Y														y	
111			y		y											
112											y				y	
113	Y		y		y											
114														y		
115											y				y	
116														y	y	
117	Y															
118			y													
119														y	y	
120										y			y			y
121							y							y	y	
122							y	y						y	y	
123							y	y			y			y	y	
124																y
125									y			y	y			y
126						y	y							y	y	

MATERIAL HANDLING EQUIPMENT MANUFACTURING COMPANY LIST

mp de	Trucks Forklift	Trucks Platfm	Trucks Side Load	Trucks Rough Terrain	Crane Rails	Cranes Fixed Bridge	Cranes Jib	Cranes Locom	Cranes Mobile Crawler	Cranes Mobile Gantry	Cranes Mobile Industria Truck	Cranes Mobile Truck	Cranes Traveling Bridge	Cranes Traveling Gantry	Cranes Truck
27							y								
28	Y	y													
29	Y	y		y											
30	Y		y												
31					y	y									
32												y			y
33						y									
34							y					y			
35	Y	y													
36					y	y	y						y	y	
37														y	
38	Y														
39									y						
40											y				
41							y								
42						y	y			y					
43	Y		y												
44	Y		y												
45	Y											y		y	y
46													y		
47														y	
48															y
49	Y	y		y											
50	Y	y													
51						y	y						y	y	
52	Y	y	y								y	y			
53							y			y			y	y	
54													y	y	
55							y						y	y	
56	Y														
57						y	y						y	y	
58	Y	y													
59	Y														
60	Y	y		y											
61		y													
62	Y														
63							y								
64										y	y				
65														y	
66	Y														
67					y								y		
68					y	y	y			y			y	y	

MATERIAL HANDLING EQUIPMENT MANUFACTURING COMPANY LIST

Comp Code	Trucks Forklift	Trucks Platfm	Trucks Side Load	Trucks Rough Terrain	Crane Rails	Cranes Fixed Bridge	Cranes Jib	Cranes Locom	Cranes Mobile Crawler	Cranes Mobile Gantry	Cranes Mobile Industria Truck	Cranes Mobile Truck	Cranes Traveling Bridge	Cranes Traveling Gantry	Crane: Tru
169							y						y	y	
170		y													
171						y			y				y		y
172						y							y	y	
173		y		y											
174	Y		y					y							
175		y													
176	Y														
177						y	y						y	y	
178	Y	y		y											
179	Y					y							y	y	
180	Y	y													
181						y							y	y	y

Comp Code	Companies	Telephone	Address
1	Abell-Howe co.	(312)366-4800	7747 W. Van Buren St. Forset Park, IL 60130
2	Acco Chain & Lifting Products Div. Babcoc	(717)741-4965	
3	Accutech Systems	(714)963-2508	18350 Ward St. Ffountain Valley, CA 92708
4	ackett Systems Inc.		
5	Acme Marine Hoist	(615)472-3030	690 Montauk Hwy. Bayport, LI 11705
6	Aero-Go, Inc.	(206)575-3344	1170 Andover Park West Seattle, WA 98188
7	Air Technical Industries	(216)951-5191	7501 Clover Avenue Mentor OH 44060
8	Allied Systems	(503)625-2560	13985 S.W. Tualatin-Sherwood Rd. Sherwood, OR97140
9	American Crane & Equipment Corp.	(215)385-6061	605 Old Swede Rd. DouglassVille, Pa 19518
10	American Monorail	(612)478-6011	3839 County Road 116 Hamel, MN 55340
11	American MonorailAnchor Crane & Hoist Service Co.		
12	Anchor Crane & Hoist Service Co.	(214)438-5100	2020 East Grauwyler St. Irving, TX 75061
13	Arrow Engineering Sales Company	(612)478-6337	3839 County Rd. 116 Hamel, MN 55340
14	ASEA Inc.		
15	Atlantic Track & Turnout Co.	(201)748-5885	Box 1589 Bloomfield, NJ 07003
16	Aurora systems Inc.	(716)827-8911	P.O. Box 709 Buffalo, NY 14240
17	Auto Specialties Manuacturing co. Brake D	(616)926-0842	2303 Pipestone Road Benton Harbor, MI 49022-8787
18	Automation Equipment Company	(314)349-5200	548 Axminister St. Louis, MO 63026-2904
19	Babcock Industries Inc. Material Handling	(800)342-2226	12755 East Nine Mile Rd Warren, MI 48089
20	Baker Material Handling Cor.	(800)627-1700	2450 West 5th North Street Summerville, SC 29483
21	Ballagh & Thrall Inc.		610 Sentry Parkway Blue Bell, PA 19422
22	Barrett INdustrial Trucks, Inc.	(815)568-6525	240 North Prospect St. Marengo, IL 60152
23	Battery Handling Systems Inc.	(314)423-7091	Box 28990 St. Louis, MO 63132
24	Baumann Handling Systems, Inc.	(312)553-7755	1208 Badger St. Yorkville, IL 60560
25	Benju Corp.	(717)762-2144	Benju Drive, P.O. Box 427 Waynesboro, PA 17268
26	Blue Giant Equipment corp.	(205)884-1500	One Industrial Park Drive Pell City, AL 35125
27	Broderson Manufacturing Corp.	(913)888-0606	Box 14770 Lenexa, KS 66215
28	Buckeye Gas Products Co.	(800)331-5393	7130 S. Lewis Tulsa, OK 68012
29	Bucyres-Erie co.	(414)768-4119	Box 56 South Milwaukee, WI 53172
30	Burro Crane, Inc.	(312)521-9200	1300 S. Kibourn Chicage, IL 60623
31	Bushman Equipment Inc.	(414)462-4380	4200 W. Douglas Ave. Miwaukee, WI 53209
32	B.E. Wallace Products Corp.		
33	Caterpillar Industrial Inc.	(800)323-0550	5960 Heisley Road Mentor, OH 44060
34	Caterpillar Lift Trucks Towmotor Corp. Su	(800)528-6050	7800 Tyler Blvd. Mentor, OH 44060
35	Central Manufacturing/Shuttlewagon	(913)422-7124	20101 W. 55th Shawnee, KS 66218
36	Champ Corp.	(818)444-9561	2439 N. Rosemead Blvd. P.O. Box 3637 EI Monte, CA 91733
37	Char-Nor Enterprises	(309)787-2427	P.O. Box 980 Milan, IL 61264
38	Clark Material systems Techonlogy Co.	(606)288-1200	333 West Vine St. Lexington, Ky 40507-1640
39	Cleco Systems	(609)825-2200	Box 829-South 12th St. Milville, NJ 08332
40	Clyde Co. AMCA international corp.	(414)784-5800	P.O. Box 312 Milwaukee, WI 53201
41	Coleman Equipment, Inc.	(201)375-6000	525 Chancellor Avenue Irvington, NJ 07111
42	Columbus McKinnon Corp.	(716)689-5400	Audubon and Sylvan Parkways Amherst, NY 14228

Comp Code	Companies	Telephone	Address
43	Crane Manufacturing & Service Corp.	(414)769-8162	6000 So. Buckhorn Ave. Cudahy, WI 53110
44	Crown Lift Trucks	(419)629-2311	40-44 S. Washington St. New Bremen, OH 45869
45	Custom INdustries, Inc.	(919)299-2885	6106 W. Market St. Greensboro, NC 27409
46	C. Itoh Industrial Machinery, Inc./TCM		
47	Dahmer Fork Lift Ltd.	(519)742-1811	31 Shirly Ave., P.O. Box 460 Kitchener, ON N2G-4A6 Canada
48	Deal Products	(215)258-6244	1315 Peach St. P.O. Box 3280 Easton, PA 18042
49	Dearborn Fabricating and Engineering Co.	(313)273-2800	19440 Glendale Ave. Detroit, MI 48223
50	Deere & Co.	(309)752-8000	John Deere Rd. Moline, IL 61265
51	Detroit Hoist & Crane Company	(313)268-2600	Box 686 Warren, MI 48090
52	Downs Crane & Hoist Co., Inc.	(213)589-6061	8827 S. Juniper St. Los Angeles, CA 90002
53	Drexel Industries, Inc.	(215)672-2200	Box 248 Horsham, PA 19044
54	Dynamic Industries, Inc.	(800)346-4858	P.O. Box 249 Barnesville, MN 56514
55	D.W.Zimmerman Manufacturing., Inc.		
56	Ederer Inc.	(206)622-4421	2925 First Ave. South, P.O. Box 24708 Seattle, WA 98124
57	Elwell-Parker Electric Co.	(216)881-6200	4205 St. Clair Ave. Cleveland, OH 44103
58	ENERPAC	(414)781-6600	13000 W. Silver Spring Dr. Butler, WI 53007
59	Engineered Crane Systems of America South	(404)442-0777	2000 McFarland/400 blvd. Alpharetta, GA 30201
60	Equipment Co. of America (ECOA)	(305)887-1772	1075 Hialeah Dr. Hialeah, FL 33010
61	Erickson corp.	(612)454-4300	3045 Highway 13 St. Paul, MN 55121
62	Feterl Mfg. Co.	(605)425-2206	411 West Center Avenue Salem, SD 58058
63	GEHL company IC Group	(414)338-7541	143 Water St. West Bend, WI 53095
64	Giant Lift Equipment Manufacturing co.,	(603)964-5127	136 Lafayette Rd. North Hampton, NH 03862
65	Global Equipment Co.	(516)485-1000	63 Hemlock Dr. Hempstead, NY 11550
66	Gorbel, Inc.	(716)377-2260	80 O'Connor Rd. Fairport, NY 14450
67	Gradall Company	(216)339-2211	406 Mill Ave. SW New Philadelphia, OH 44663
68	Gregory Industrial Trucks	(201)471-8003	457 River Rd., P.O. Box 906 Clifton, NJ 07014-0906
69	Grove ManufacturingCo., Inc.	(717)597-8121	Box 21 Shady Grove, PA 17256
70	Handling Systems Inc.	(312)352-1213	408 E. Cossit Ave. La Grange, IL 60525
71	Handling Technology Inc.	(716)377-7111	80 O'connor Rd. Fairport, NY 14450
72	Harlo Products corp.	(616)538-0550	4210 Ferry St. Grandville, MI 49418
73	Harnischfeger Corp.	(414)671-4400	Box 554 Milwaukee, WI 53201
74	Harrington Hoist	(717)665-2000	401 West End Ave. Manheim, PA 17545
75	Hatco International	(717)246-3666	Lombard Road Red Lion, PA 17356
76	Heco-Pacific Manufacturing Inc.	(415)487-1155	1510 Pacific St. Union City, CA 94587
77	HEHL Company IC group		
78	Hercules Industries Div. of Dozier Equipm	(615)259-3308	2933 Armory Dr. Nashville, TN 37204
79	Hertz Equipment rental Corp.	(201)428-6833	-3 Entin Rd. Parsippany, NJ 07054
80	HIAB Cranes & Loaders Inc.	(302)328-5100	258 Quigley Blvd. New Castle, DE 19702
81	Hi-Lift Trucks A Division Of Electrolux constructor Ltd.		Unit 2, Gibbons Industrial Park Kingsford, West Midlands,
82	Hovair Systems, Inc.	(206)575-3306	1210 Andover Park E. Seattle, WA 98188
83	Hubtex of North America Inc.	(803)583-8128	380 Wingo Heights Rd. Spartanburg, SC 29301
84	Hydrolectric Lift Trucks, Inc.	(513)382-6917	370 Davids Dr., P.O. Box 768 Wilmington, OH 45177

Comp Code	Companies	Telephone	Address
85	Hyster Co	(217)443-7000	Box 847 Danville, IL 61834-0847
86	Hyster company construction Equipment Div	(309)853-3571	2000 Kentville Rd. Kewanee, IL 61443
87	Hyster Company Industrial Truck Div.	(217)443-7000	Box 847 Danville, IL 61834-0847
88	Idea Engineering & Fabricating Inc.	(313)834-8000	13881 Elmira Detroit, MI 48227
89	Industrial Crane & Equipment Co., Inc.	(312)378-0100	4701 W. Iowa St. Chicago, IL 60651
90	Ingersoll-rand Material Handling Products	(206)624-0466	2724 6th Ave. South Seattle, WA 98134-2102
91	Interlake Packaging	(312)535-3100	4225 Frontage Rd. Oak Forest, IL 60452
92	J I Case Co.		
93	John T. Hepburn, Ltd. Mechanical Div.		
94	J.L.G. Industries Inc.	(717)485-5161	JLG Drive McConnellsburg, PA 17233
95	Kalamazoo Manufacturing co.	(616)685-9851	320 North Acorn St. Plainwell, MI 49080
96	Kalmar-AC Handling Systems, Inc.	(614)878-0885	777 Manor Park Drive Columbus, OH 43228
97	Komatsu forklifts (USA), Inc.	(213)802-1312	14815 Firestone Blvd. La Mirada, CA 90637
98	Kornylak corp.	(513)863-1277	400 Heaton St. Hamiton, OH 45011
99	Kranco, Inc.	(713)466-7541	Box 40400 Houston, TX 77240
100	K-D Manitou, Inc.	(800)433-3304	Box 4547 Waco, TX 76705
101	Lansing Inc.	(716)832-7209	P.O. Box 4467, 15060 Farm Creek Drive Woodbridge, kVA 22104-446
102	Lead Industries Association, Inc.	(212)578-4750	292 Madison Ave. New York, NY 10017
103	Lift Tech International Crane & Hoist Ope	(616)733-0821	414 W. Broadway Muskegon, MI 49443
104	Lion Mfg. Co.	(702)359-3500	10 Greg Street Sparks, NV 89431
105	LISTA International corp.	(617)429-1350	106 Lowland St. Holliston, MA 01746
106	Lull Corp.	(612)454-4300	3045 Hwy. 13 St. Paul, MN 55121
107	Machinery distribution, Inc. Mitsubishi F	(713)675-6000	247 McCarty Drive Houston TX 77029
108	Machinery Distribution, Inc.Nissan Industrial Equipment Co.		
109	Mannesmann Demag Material Handling Div.	(216)248-2400	Box 39245 Cleveland (Solon), OH 44139
110	Marathon LeTourneau co. Heavy Equiptment	(214)236-6500	Box 2307 Longview, TX 75606
111	Master Craft Industrial Equipment Corp.	(912)386-0610	Route 2, Box 573 Tifton GA 31794
112	Materials Transportation Company	(800)433-3110	P.O. Box 1358 Temple, TX 76503-1990
113	Mercury Division Pettibone corp.	(312)772-9300	4700 W. Division St. Chicago, IL 60651
114	Milwaukee Crane & Equipment Co.	(503)639-8892	10250 S.W. North Dakota St. Tigard, OR 97223
115	MI-Jack Products		
116	Morgan Engineering AMCA Systems Inc., Uni	(216)823-6130	947 East Broadway Alliance, OH 44601
117	Nissan Industrial Equipment Co.	(901)396-5170	2900 Datsun Dr., P.O. Box 161404 Memphis TN 38116
118	Nordskog Electric Vehicles	(714)793-2891	1981 W. Redlands Blvd. Redlands, CA 92373
119	Northern Engineering Corp.	(313)259-3280	210 Chene St. Detroit, MI 48207
120	Northwest Engineering Company	(414)435-5321	201 W. Walnut St., P.O. Box 1009 Green Bay, WI 54305
121	Orley Meyer, Inc.	(414)782-1810	2550 S. 170th St. New Berlin, WI 53151
122	Overhead Crane & Service corp.	(313)941-3600	35171 Crane Rd. Romulus, MI 48174
123	Paceco Inc. A Sub. of Fruehauff	(601)896-1010	P.O. Box 3400 Gulfport, MS 39505
124	Peerless Div. Lear Siegler, Inc.	(503)639-6131	Box 447 Tualatin, OR 97062
125	Pettibone corp.	(312)772-9300	4700 W. Division St. Chicago, IL 60651
126	Philadelphia tramrail Co. Overhead Crane	(215)533-5100	2207 E. Ontario St. Philadelphia, PA 19134

Comp Code	Companies	Telephone	Address
127	Planet corp.	(517)321-0200	2150 Apollo Drive Lansing, IM 48906
128	Plymouth Locomotive Works Inc. Sub. of Ba	(419)687-4641	Bell & High Sts. Plymouth, OH 44865
129	Prime-Mover Co.	(319)263-1761	Hwy. 61 N., Box 879 Muscatine, IA 52761
130	Professional Materials Handling co., Inc.	(407)677-0040	4203 Landmark Dr. Orlando, FL 32817
131	Pro-Fab-Co.	(313)332-7400	355 Sanford St. Pontiac, NI 48058
132	R O Corp.	(913)782-1200	Box 2110 Olathe, KS 66061
133	Railglide Systems, Ind.	(313)238-2440	P.O. Box 6295 Flint, MI 48506
134	Rampmaster Incorporated	(305)569-9600	9825 Osceola Blvd. Vero Beach, FL 32960
135	Raymond corp.	(800)235-7200	South Canal St. Greene, NY 13778
136	Reading crane & Engineering co.	(215)323-5450	1200 High St. Box 759 Pottstown, PA 19464
137	Renner Smith Manufacturing	(414)461-3200	P.O. Box 10375 Milwaukee, WI 53210
138	Revolvator Industrial Truck Division Greg	(201)471-8003	457 River Rd. Clifton, NJ 07014-0906
139	Ridge Tool Company Subsidiary emerson Ele	(216)323-5581	400 Clark St. Elyria, OH 44036
140	Roach &Associates, Inc.	(707)433-8202	211 Exchange Ave. Healdsburg, CA 95448
141	Robbins & Myers Hoist Div. KONE Materials	(513)328-5100	1311 Lagonda Ave. Springfield, OH 45503
142	Roll Rite corp.	(415)638-9305	421 Pendelton Way, Box 2107 Oakland, CA 94621
143	Royal engineering company	(609)396-4506	330 Pennington Ave. Trenton, NJ 08618
144	Royal Industrial Storage Systems	(803)547-5931	Atkins Center P.O. Box 2844 Spartanburg, SC 29304
145	Ruger Equipment Inc.	(614)922-3000	615 W. Fourth St. Uhrichsville, OH 44683
146	R. Stahl, Inc.		
147	Sackett Systems Inc.	(312)766-6600	1033 Bryn Mawr Ave. Bensenville, IL 60106
148	Sasgen derrick	(312)638-0800	3101 W. Grand Ave. Chicago, IL 60622
149	Schaeff Inc.	(712)944-5111	E. on Hwy. 20, Box 1917 Sioux City, IA 51102
150	Sellick Equipment Limited	(519)738-2255	358 Erie St. N., Box 1000 Harrow, ON NOR-1GO, Canada
151	Shepard Niles Inc.	(607)535-7111	250 N. Genesee St. Montour Falls, NY 14865
152	Silent Hoist & Crane Co.	(718)238-2525	841-877 63rd St. Brooklyn, NY 11220
153	Spanco Inc.	(215)269-2080	4102 Edges Mill Rd. Downingtown, PA 19335
154	Spanmaster Div. Jervis B Webb Co.	(216)933-6166	739 Moore Rd. Avon Lake, OH 44012
155	Stanspec Corp.	(216)451-9800	13610 Deise Ave. Cleveland, OH 44110
156	Steinbock GmbH Professional Materials Han	(305)677-0040	4203 Landmark Dr. P.O. Box 14098-A Orlando, FL 32817
157	Stewart MHC	(214)578-8090	2512 Summit suite 306 Plano, TX 75074
158	Stokvis Multiton Corp.	(516)822-7400	520 W. John St. Hicksville, NY 11801
159	Systems Products corp.	(312)738-2623	2323 W. 18th St. Chicago, IL 60608
160	Taylor Machine Works, Inc.	(601)773-3421	Box 150 Louisville, MS 39339
161	taylor-dunn Manufacturing Company	(714)956-4040	Box 4240-M Anaheim, CA 92803
162	TCM America (MBK) Inc.	(609)467-3200	Box 429 Bridgeport, NJ 08014
163	Techniflow Corp.	(201)375-4800	525 Chancellor Ave. Irvington, NJ 07111
164	Thern Inc.	(507)454-2996	Box 347 Winona, MN 55987
165	Total Transportation systems, Inc.	(804)595-5153	Box 6127, 813 forrest Dr. Newport News, VA 23606
166	Toyota Industrial Equipment	(213)618-5064	19001 S. Western Ave. Torrance, CA 90509
167	Twin City Monorail, Inc.	(612)478-6565	3839 county Rd. 116 Hamel, MN 55340
168	Unified Industries, Inc.	(517)546-3220	1033 Sutton St. Howell, MI 48843

Comp Code	Companies	Telephone	Address
169	United States Monorail corp.	(617)482-8383	1234 Washington St. Boston, MA 02118
170	United Tractor Company	(219)926-1186	116 N. 15th St. chesterton, IN 46304
171	U.S. Crane, Inc.	(407)859-6000	P.O. Box 13290 Orlando, FL 32859
172	Vangard Enterprises, Inc.	(804)599-5300	12256 Warwick Blvd., P.O. Box 6054 Newport News, VA 23606
173	VME Americas Inc.	(216)383-3000	23001 Euclid Ave. Cleveland, OH 44117-8017
174	Voss equipment, Inc.	(312)568-1000	15241 S. Commercial St. Harvey, IL 60426
175	West Bend Equipment Corp.	(414)334-5561	515 Schoenhaar Cr., Box 497 West Bend, WI 53095
176	White Lift Truck Parts & Mfg. Co. Inc.	(612)424-3880	8600 Jefferson Highway Osseo, MN 55369
177	Whiting Corp.	(312)468-9400	15700 Lathrop Ave. Harvey, IL 60426
178	Wiggins Lift co.	(805)485-7821	2571 Cortex St. Oxnard, CA 93030
179	Wilde Engineering & Sales, Inc.	(616)834-5696	P.O. Box 106 Bailey, MI 49303
180	Yale Materials Handling corp.	(201)788-3100	Routes 523 & 31 Flemington, NJ 08822
181	Zenar Corp.	(414)764-1800	7301 S. 6th St. Oak Creek, WI 53154